SELF-PACED LEARNING PACKAGES IN BASIC CLOTHING CONSTRUCTION

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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION

According to Edling (12, p. 13) the traditional concept of teaching is seriously being questioned. Previously "Instruction has been designed to function within what has been thought to be the limited capacities of the teacher." However, as a result of innovations in education the capacities of the teacher have widened and new methods of instruction are emerging which focus on the capabilities of the student. Individualized instruction is steadily being seen as one way of focusing on the capabilities of the student.

"Each student is a unique human being, with combinations of aptitudes, knowledges, achievement levels, interests, learning styles and needs, which differ from that of any other student." (21, p. 16) Perhaps educators should adapt their teaching to individual student differences.

As more and more students enter college it becomes increasingly difficult to give each student the personal attention he needs. The traditional method of instruction intensifies this problem. However, programs which employ individualized instruction and/or independent study free the teacher to spend the time he would normally spend lecturing to work with students as diagnostician, prescriber, and evaluator.

Not only do students vary in ability, "but each learns in his own way and at his own rate." (8, p. 161) A teaching technique which is quite effective for teaching one student may be quite ineffective for another (8, p. 205). Currently emphasis is being placed on different methods of instruction and many research studies are being conducted in order to determine the amount of learning which takes place when each method is employed. Many different types of instructional materials are being designed, implemented, and evaluated for use in independent study and individualized instruction. One type of instructional material which is receiving attention from many educators today is the self-paced learning package.

Purpose of the Study

The purpose of this study was to develop and evaluate a self-paced learning unit, Getting Started: Cutting Your Garment. The unit was used with students enrolled in CTM 1103, Basic Clothing Construction, at Oklahoma State University, spring, 1972.

Objectives

Specific objectives of the study were:

1. To develop a self-paced learning unit for use in Basic Clothing Construction.

2. To determine the effectiveness of the unit by measuring gain in student achievement through use of a pre-post test.

3. To investigate the degree of correlation which exists between percent of gain on the post-test and (1) cumulative grade point

averages, (2) ACT* English scores, and (3) ACT composite scores.

4. To design an instrument for determining student attitude toward the self-paced learning unit.

5. To investigate the relationship between student attitude and (1) cumulative grade point average, (2) classification, and (3) major field of study.

Hypothesis

It was hypothesized that students' post-test mean scores would be significantly higher than pretest mean scores, and that there would be a significant correlation between percent of gain on the post-test and cumulative grade point averages, ACT English scores and ACT composite scores.

Assumptions

1. Students are capable of learning independently with little or no assistance from an instructor.

2. The amount of gain in student achievement on the post-test will indicate effectiveness of the learning packages.

3. Cumulative grade point averages and ACT scores are a reliable measure of academic ability.

Limitations of the Study

1. The sample was limited to 49 students enrolled in CTM 1103, Basic Clothing Construction, at Oklahoma State University, spring, 1972.

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*American College Testing Program.

2. The material covered in the unit, Getting Started: Cutting Your Garment, was limited to four concepts: preparation of fabrics for cutting, pattern layout techniques, cutting special fabrics, and transferring pattern markings.

3. Student use of the materials was limited to a ten-day period.

Definition of Terms

1. Individualized instruction: the pursuit of predetermined goals by working through carefully designed instructional materials which allow for individual student differences. Students may progress at their own pace within specified limits.

2. Independent study: the independent pursuit and acquisition of knowledge and skills taking place in the absence of the teacher and in lieu of regularly scheduled class meetings.

3. Pretest: an instrument for measuring student knowledge of subject matter prior to instruction.

4. Post-test: an instrument for measuring student gain in knowledge upon completion of instruction.

5. Self-paced learning packages: "A self-instructional unit developed for learning one basic concept or idea in which the idea to be learned is broken down into its several components." (28, p. 168)

CHAPTER II

REVIEW OF LITERATURE

The responsibility of an educator is to help each student become engaged in activities which will result in desired learning and to motivate students to see the need for learning. In order to accomplish this task teachers can emphasize the value of the subject matter to the student and capitalize on his natural motives. Each student must want to learn and realize that the act of learning is his responsibility.

In order to determine whether learning has occurred it becomes necessary for teachers to evaluate student achievement. Each student's achievement is affected by the techniques by which he is being instructed and his desire to learn (8, p. 205). Attempts are being made to better fulfill individual student needs in educational institutions today through independent study programs and individualized instruction.

> In planning an individualized learning system, the distinction between individualized learning and independent study must be remembered. The two terms are not synonymous. Individualized learning is a more structured program than independent study, while at the same time remaining very flexible. To individualize instruction in a subject area, the student and his teacher select from a variety of materials and media and determine the sequence of study that appears most effective in terms of the student's abilities and needs. A student may choose to work independently in an individualized learning program, but merely working by himself does not mean that a student is participating in an individualized learning program. (3, p. 776)

Individualized Instruction

Through individualized instruction a student may progress at his own rate and as far as his capabilities permit while under the guidance of his instructor. Wolfson points out that this type of instruction differs from traditional group instruction in that individualized instruction rejects the idea that students ". . . must move through a predetermined, sequenced curriculum." (33, p. 31) The individualizing of instruction allows for individual student differences and interests, individual styles and backgrounds, and response to individual needs.

Blake and McPherson (6, pp. 64-65) noted that individualized instruction has advantages for both teacher and student which were not found in the conventional method of instruction. The following advantages were noted for the student: (1) he can proceed through each subject at his own pace, (2) a one-to-one relationship exists between him and the subject, (3) he gains immediate satisfaction as he obtains an instantaneous response to his answers for questions, (4) he has a clearer understanding of the structure of the subject he is studying, and (5) he is able to spend more time studying aspects of the subject with which he is less familiar. Advantages for the teacher are: (1) he is freed from teaching many routine basic skills of a subject; this enables him to spend more time with students who need help, (2) he is able to meet more accurately individual students' instructional needs, and (3) it allows the teacher to bring a carefully developed and flexibly structured program to his students.

Edling (12, pp. 13-14) noted other advantages to an individualized instruction program. Students scored higher on standardized tests and

there was a decrease in student absenteeism. There were also fewer disciplinary problems. Changes were evident in the behavior of teachers as well. Teachers seemed to work harder and were more satisfied because they felt they were doing more for their students.

Many attempts throughout the history of American education have been made to individualize instruction; however, none of the attempts has been completely successful (20, p. 405). Today different programs are being used in schools which utilize individualized instruction.

> Approaches have included individual projects, tutoring on a one-to-one basis, programmed learning and a variety of organizational plans. None of these guarantees individualization of instruction. Organization and materials can only provide the environment and arrangements which free the teacher to meet the educational needs of all the pupils in the classroom. (33, p. 31)

Schedules, buildings, teachers, and curriculum materials must be flexible in order to facilitate individualized instruction. The teacher is an important key in the process as it is his responsibility to direct the student, diagnose and evaluate his progress, and prepare or gather special materials which are essential for the education of the student (22, p. 35). Teachers must realize that their job is no longer one of dispensing information. Kapfer and Swenson (20, p. 405) believe educators have been successful in obtaining flexible buildings and teachers, and designing flexible schedules. They contribute the failure in many individualized instruction programs to rigid curricula.

Frequently instructional materials used in individualized instruction programs were originally designed for group-paced instruction. Textbooks designed to teach the average student lack stimulation for both slow and fast learners. Currently much emphasis is being placed on learning packages and educators are hopeful that they may alleviate

this problem (20, p. 405).

Several studies have been conducted in order to determine the effectiveness of individualized instruction. Opinions vary as to its success. Most research has indicated that there is no significant difference in the amount of learning which results from individualized instruction when it is compared with conventional methods of instruction. At the University of Michigan, however, Parsons (23, p. 39) found that "Throughout the course . . . all three experimental groups achieved very significantly more and faster than the control group." Reactions of students and teachers have generally been more favorable with regard to individualized instruction than to the conventional method.

Independent Study

Independent study in the United States is not new. In early colonial times it was used as a substitute for collegiate education and in apprentice systems for the professions (7, p. 10). While most independent study programs in American institutions of higher education began after the 1920's, St. Vincent College had a required independent study program as early as 1870. The program was continued there until 1948 when students were allowed to take a comprehensive examination as an option to the independent study program (7, p. 12). Numerous programs have originated and been studied since the 1940's.

Emprey (13, p. 104) sees independent study as "the pursuit and acquisition of knowledge and skills by students with limited assistance from their classroom teacher." Components of the conventional method of instruction, such as lectures, demonstrations, and discussions, are

not utilized in independent study.

Types of independent study range from individual to small group approaches. Students may meet with their instructors periodically for guidance in meeting objectives of a problem posed by the teacher or they may be involved in self-directed studies not related to any course requirements. The latter type places more responsibility upon the student (13, p. 104).

One main objective of education is to help the student become self-directed (13, p. 104). Independent study provides an excellent means by which students may develop and cultivate this quality. "This type of study encourages students to be creative, to reach out for the unknown, and to assume responsibility for their own learning." (15, p. F-7)

Darrow and Van Allen (10, pp. 31-32) place activities of independent study under the following four categories: searching, organizing, originating, and communicating. In the "searching" category, students are seeking to answer "who, what, why, where, and how." When "organizing" a student is attempting to put his understanding of information and ideas together. While engaged in "originating" activities the student tests new ideas or materials which he might have in order to determine what takes place under various circumstances. Being able to communicate or convey new ideas is an important component of independent study.

Emprey (13, p. 104) believes that "independent study is psychologically sound. An individual learns best what he discovers for himself." Results of a study conducted at Stanford University confirm this idea. Yearly grade point averages of an independent-study group

were compared with those of the all-university group by academic years from 1931 to 1936. "In both predicted and actual accomplishment, the independent study group . . . appear markedly superior to the university group as a whole." (27, p. 62)

Results of research conducted at Antioch College from 1956 to 1960 indicated no significant difference in retention of learning between the group which had studied under the regular method of instruction and the group which had studied under the experimental method of independent study (5, p. 184).

Learning Packages

Educators are using learning packages in individualized instruction and independent study programs from coast to coast. The concept of learning packages is not new. Packages which have existed in the past supplemented textbooks and contained additional readings, chapter questions, workbooks, examinations, and teaching aids. Today packages are prepared with more care, are more comprehensive, and incorporate various teaching techniques and multisensory media (17, p. 781). They consist of complementary parts of a unified whole:

> . . . unless the package includes considerable structure, optimal learning may be precluded. Unless there is some predetermined sequencing, no part of the materials can assume prior student skills, techniques, and ideas included in any of the other materials, and no part can pyramid learning on previously developed skills. (17, p. 781)

Within the structured framework, packages are flexible as they offer various means by which the student may achieve the objectives.

The Contract Plan (16, pp. 842-846) and the Dalton Plan (26, pp. 837-840) were two plans for carrying out unit assignments utilizing

individualized instruction. They may be regarded as forerunners to learning packages used today. Both plans took into account the needs, interests, and capabilities of the student. Objectives, study guides, activities for accomplishing the objectives, and specifications for accepted accomplishment were carefully delineated. Under the Dalton Plan if students could satisfactorily prove knowledge of the materials covered in the unit before studying the unit they were excused from it and given credit (26, p. 840).

Several different designs of learning packages are currently available. They are alike in many respects, however each varies to some degree.

Learning Activity Package

The Learning Activity Package (LAP) was developed by the staff at Nova Schools in Fort Lauderdale, Florida. The LAP provides the teacher with a means by which he may deal with low-, average-, and high-ability students in a single classroom and still provide them with a worthwhile experience (25, p. 34). According to Wolf and Smith (32, p. 48) the LAP is ". . . a private learning plan for each student, with readings, study guides, suggested resources, and self-evaluation sections."

LAPs are developed around a major concept which is broken down into subconcepts. Each package begins with a rationale for the particular concept or theme about to be studied. The package lists objectives which are stated behaviorally and are directly related to the main concept. Each package contains learning activities which will aid the student in attaining the behavioral objectives. Three sources of evaluation--a pretest, self-evaluation, and post-test--are included in

each package. These tests are designed to measure attainment of specific behavioral objectives of that particular package. Teacher evaluation inventories are also placed in the packages. Each package contains related or in-depth studies which the student might pursue in addition to required activities.

The following format is used for constructing Learning Activity Packages:

(1) Rationale
(2) Performance objectives
(3) Pretest
(4) Pretest analysis
(5) Basic references
(6) Program for learning
(7) Self-evaluation test
(8) Self-evaluation test analysis
(9) Appendix-references, problems and applications, supplementary information, glossary, etc.

(2, p. 785)

Rapp (25, p. 34) identifies three characteristics of a LAP: (1) the material presented in the Learning Activity Package is highly structured, (2) students have opportunities to make choices, and (3) the teacher is involved in the student's learning making him an indispensable and integral part of the student's learning experiences.

UNIPACS

UNIPACS were developed by the Kettering Foundation through the project I/D/E/A (Institute for the Development of Educational Activities) (19, p. 179). They are collected, disseminated, stored and evaluated at the Materials Dissemination Center. UNIPACS were developed by teachers with the assistance of learning psychologists, subject matter specialists, and curriculum programmers (20, p. 406).

UNIPACS include five essential ingredients for individualizing instruction: (1) concepts, (2) behavioral objectives, (3) multi-dimensional learning materials and activities, (4) pre-, self-, and post-evaluation, and (5) quest activities.

Hartford Instructional Packet

The Hartford Instructional Packet or HIP was developed by the Hartford, Connecticut school system. HIPs were patterned after Nova's Learning Activity Package; however,

> . . . with the deep awareness and concern of teachers for local urban problems and environment, Hartford's version of the Learning Activity Package developed into a packet styled and designed for local situations. (30, p. 12)

Teaching-Learning Unit

Another type of learning package which is being used to individualize instruction is the Teaching-Learning Unit (TLU). They are used under PLAN (Program for Learning in Accordance With Needs) which was initiated by a joint effort of American Institutes for Research and Westinghouse Learning Corporation (11, p. 107). After a student receives his plan of study and consults with his instructor he begins work on the first module in his plan of study. A module is composed of a set of objectives which are to be achieved by the student. "The manner in which he achieves these objectives depends on the TLU the computer suggests or the student chooses." (11, p. 108) The TLUs are chosen from a wide variety of units depending upon the needs, abilities, and interests of the student.

Home Economics Learning Packages

Home Economics Learning Packages (HELP) were developed by home economics faculty members and students at Pennsylvania State University. Each package presents a basic concept of some aspect of home economics subject matter. The packages are divided into subconcepts or lessons which are a part of the general or basic concept. The HELP format is essentially the same as the UNIPAC format (28, p. 769).

Use of Learning Packages

A study was conducted at Cornell University during the 1967-68 school year on the development and evaluation of curriculum packages. Thirty-two different classes and twenty-nine teachers were involved in the study. A month was allotted for teaching the unit, "Preparation for the Dual Role: Homemaker-Wage Earner". One main objective of the researchers was to prepare educational materials which were suitable for slow and low-average learners. The sample consisted of 604 high school juniors and seniors who were enrolled in home economics classes. Students were classified by standardized intelligence tests. In the main study 32 percent were slow learners, 29 percent low average, 26 percent were high average, and 13 percent above average. The curriculum package was evaluated in three different ways: (1) it was continually assessed during the pilot study, (2) teachers judged the worth of the package after using it in their classroom, and (3) student gain scores as a result of instruction were reviewed.

> As evidenced by the scores on equivalent forms of an achievement test administered before and after, students in both the pilot and main study groups made significant gains.
>
> For the most part, data from the study support the statement that the package was useful to a variety of

> teachers and made a real contribution to the learning of students in classes which included large numbers of the academically less able. (18, p. 358)

Collier (9, p. 30) conducted a recent study at Oklahoma State University in which two self-learning packages were designed, implemented, and evaluated using a control and experimental group. No significant difference was found between the level of learning exhibited by the controlled group and the experimental group. Student attitude toward the packages as a teaching aid was favorable.

Collier (9, pp. 30-31) recommended that packages be developed in different areas, that directions given in packages be made more definite and specific, and that research be extended with regard to academic achievement and student attitude toward packages.

Summary

Educators are continually seeking more effective methods for instructing students. Since each student varies in ability, knowledge, interests, and learning styles, attempts are being made to better fulfill individual student needs through independent study programs and individualized instruction. The self-paced learning package is one type of instructional material which is being used today in independent study and individualized instruction.

CHAPTER III

PROCEDURES AND ANALYSIS OF DATA

The objectives of this study were: (1) to develop a self-paced learning unit for use in Basic Clothing Construction, (2) to determine the effectiveness of the unit by measuring gain in student achievement through use of a pre-post test, (3) to investigate the degree of correlation which exists between percent of gain on the post-test and cumulative grade point averages, ACT English scores, and ACT composite scores, (4) to design an instrument for determining student attitude toward the self-paced learning unit, and (5) to investigate the relationship between student attitude and cumulative grade point average, classification, and major field of study.

Development of the Self-Paced Learning Unit

The subject matter included in the self-paced learning unit, Getting Started: Cutting Your Garment, was organized into four learning packages: (1) preparation of fabrics for cutting, (2) pattern layout techniques, (3) cutting special fabrics, and (4) transferring pattern markings (see Appendix A). Basically the learning packages were patterned after the Learning Activity Packages (LAPs) developed at Nova School in Fort Lauderdale, Florida (29, p. 20). A brief rationale was composed and behavioral objectives were established. Required and optional learning activities were designed to help students achieve

each of the objectives. Fabric samples, illustrations, patterns, and other materials necessary for use with the packages were collected and packaged for students to use in the Home Economics Independent Learning Center. Pretest, post-test and self-evaluation devices were designed for the unit. The pretest and post-test consisted of fifty multiple choice questions designed to measure attainment of all behavioral objectives; however, questions were stated differently on each test (see Appendix B).

Pilot Study

Thirty-three students enrolled in Basic Clothing Construction, fall, 1971, formed the pilot group which tested the materials. A pre-test was given to all participants. Students were then given the self-paced learning unit and told that the supplementary materials necessary to complete the unit had been placed in the Learning Center. Upon completion of the unit they were given a post-test and asked to complete a questionnaire. The questionnaire included questions relating to effectiveness of the packages, student likes and dislikes about the package format, and previous sewing experience. In view of reactions to the unit and responses on the questionnaire, the packages and questionnaire were revised. Packages were made easier to follow and understand, and more learning experiences were added. An evaluation sheet was developed from the questionnaire. Questions regarding previous sewing experience were omitted from the evaluation sheet, as they were considered unnecessary for this study.

Presentation of the Unit

The self-paced learning unit was used by all 64 students enrolled in Basic Clothing Construction, spring, 1972. The class is presently scheduled for one lecture and two laboratory periods per week. The pretest was given during the first laboratory. Students were told to complete the unit during the following ten days at their own pace and at a time convenient for them. Students were dismissed from one laboratory during this period. The material presented in the unit was not covered in lecture; however, questions which students had over the material were answered during the laboratory.

At the end of the ten-day period the post-test was given and students completed the evaluation sheet. Students for whom all necessary data were not available were eliminated from the study, leaving a total of 49 students.

Statistical Analysis

The following variables were used in the analysis: (1) pretest raw scores, (2) post-test raw scores, (3) students' cumulative grade point averages, and (4) students' ACT English and composite scores.

T-test

In order to determine effectiveness of the self-paced learning unit students' pretest scores were compared with their post-test scores. The mean score on the pretest was 61.3 with a standard deviation of 10.01. The mean score on the post-test was 72.2 with a standard deviation of 9.27. The students' t-ratio for paired samples was

significant at the .001 level of confidence; therefore the hypothesis, students' post-test mean scores would be significantly higher than pretest mean scores, was supported (see Table I).

TABLE I

COMPARISON OF PRETEST AND POST-TEST SCORES

Test	N	Score			SD
		Low	High	Mean*	
Pretest	49	22	74	61.31	10.01
Post-test	49	52	86	72.24	9.27

*The students' t-ratio of 6.62671 was significant at the .001 level of confidence with 48 degrees of freedom.

Students' scores on the pretest ranged from 22 to 74, while students' scores on the post-test ranged from 52 to 86. The distribution of pretest and post-test scores is shown in Table II.

TABLE II

DISTRIBUTION OF PRETEST AND POST-TEST SCORES

Score	Pretest		Post-test	
	Number (N=49)	Percent	Number (N=49)	Percent
5-9	0	0.0	0	0.0
10-14	0	0.0	0	0.0
15-19	0	0.0	0	0.0
20-24	0	0.0	0	0.0
25-29	1	2.0	0	0.0
30-34	0	0.0	0	0.0
35-39	0	0.0	0	0.0
40-44	0	0.0	0	0.0
45-49	1	2.0	0	0.0
50-54	4	8.1	0	0.0
55-59	5	10.2	3	6.1
60-64	12	24.4	5	10.2
65-69	4	8.1	3	6.1
70-74	15	31.0	9	18.4
75-79	7	14.2	6	12.2
80-84	0	0.0	14	28.6
85-89	0	0.0	6	12.2
90-94	0	0.0	3	6.1
95-99	0	0.0	0	0.0

Forty-two students made a higher score on the post-test than on the pretest, six students made a lower score, and one student's score remained the same. Pretest and post-test scores for all students may be found in Table III.

TABLE III

STUDENT PRETEST AND POST-TEST SCORES

Student	Pretest Score	Post-test Score	Difference
1	58	74	16
2	66	74	8
3	70	78	8
4	72	70	- 2
5	70	68	- 2
6	66	68	2
7	74	82	8
8	74	68	- 6
9	70	72	2
10	68	76	8
11	56	80	24
12	66	74	8
13	68	80	12
14	62	72	10
15	52	60	8
16	64	66	2
17	60	62	2
18	68	78	10
19	56	68	12
20	48	82	34
21	54	76	22
22	54	60	6
23	50	80	30
24	68	78	10
25	56	86	30
26	64	80	16
27	68	76	8
28	48	84	36
29	68	70	2
30	22	78	56
31	60	60	0
32	72	86	14
33	46	54	8
34	56	52	- 4
35	56	54	- 2
36	74	84	10
37	54	62	8
38	70	78	8
39	58	72	14
40	72	86	14
41	64	82	18
42	60	78	18
43	60	66	6
44	70	82	12
45	44	56	12
46	56	60	4
47	72	76	4
48	52	68	16
49	68	64	- 4

Correlation of Variables With Gain on Post-Test

Another hypothesis was that there would be a significant correlation between percent of gain on the post-test and cumulative grade point averages, ACT English scores and ACT composite scores. Correlation coefficients may be found in Table IV. None of the correlation coefficients were significant, therefore the hypothesis was rejected.

TABLE IV

CORRELATION BETWEEN STUDENT GAIN ON POST-TEST AND SPECIFIED ACADEMIC VARIABLES

Variable	Correlation Coefficient	Probability*
Cumulative Grade Point Average	0.003112	0.9809
ACT English Score	-0.010197	0.9429
ACT Composite Score	0.045836	0.7527

*N=49

Analysis of Responses to the Evaluation Sheet

Upon completion of the self-paced learning unit all students filled out an evaluation sheet. A copy of the evaluation sheet may be found in Appendix C.

Students were asked whether they preferred lecture or self-paced learning packages and why. Seventeen (35%) preferred the lecture method while 31 (63%) preferred the self-paced learning packages. One student indicated that she liked both methods of instruction. Students who preferred the self-paced learning packages over the lecture method of instruction listed the following reasons:

Response	No. of Students
Can move at your own pace	17
Can be sure that you are getting correct notes	8
Can repeat as many times as necessary	8
Can study at times which are convenient	6
Lectures are boring and repetitious for those who already know the information	4
Illustrations and samples were helpful	3
Learn more and remember it longer	3

"I don't like to be lectured to" was the reason given by one student who preferred the packages. Several students indicated that it was difficult to take notes on lecture material which they did not fully understand. Students indicated that they enjoyed being able to study at a time which was convenient for them and that they liked working at their own pace, repeating information when necessary. Students sometimes complain about having to sit through a lecture over subject matter with which they are already familiar. Comments from several students in this study support this complaint; for example, "If I already know the material I can go faster, rather than wasting my time sitting through the lecture."

Those students who preferred the lecture method of instruction listed the following reasons:

Response	No. of Students
The packages required too much time	8
I can ask questions in lecture	7
I put off work unless I have someone to push me	4

Since the self-paced learning packages were not totally integrated into the planning of the entire semester course, students were meeting class three to five hours per week in addition to completing the packages. This could partially account for the reaction "requires too much time." Several students who preferred the self-paced learning packages over the lecture also commented on the large amount of time required to complete the packages.

Responses indicated that students viewed the "lecture" method as really a lecture-discussion where there was interaction between student and instructor. The third reaction is very common among students--they need a push. Hopefully, somehow they can be taught to "push" themselves through carefully designed, self-directing learning packages.

In an open-end question students were asked if the self-paced learning packages were easy to understand and follow and why or why not. The question yielded the following responses. Forty-eight students (98%) indicated that the packages were easy to follow and understand while one student disagreed. The student who found the packages difficult to understand gave no reason for her response, but commented that the examples and illustrations were explained well. The following

responses were given as reasons for the packages being easy to follow and understand:

Response	No. of Students
Simply stated, clear, easy to understand	13
Examples and illustrations explained well	9
Planned step-by-step and well organized	7
Directions clear and easy to follow	5
"To the point" and stressed the most important ideas	3
Related materials organized into one package with each package covering only one concept	2

Students indicated throughout their responses to the open-end questions that adequate space was not available in the Learning Center when they were working through some of the required activities. Many home economics classes at Oklahoma State University utilize the facilities in the Center; therefore, space was limited. Several students also indicated that they had had previous sewing experience and found parts of the packages boring. They did indicate, however, that they "benefited from the project" and that they skimmed the parts of the packages containing information they already knew.

Students were asked to indicate the extent to which they thought self-paced learning packages should be integrated into the total course. A majority of the students (65%) indicated that they preferred only a part of the course material in packages, 20 percent expressed a desire for the entire course material in packages, and 12 percent thought none of the course should be taught with self-paced packages. One student omitted the question.

Students were asked to give their over-all reactions to the self-paced learning packages by checking various descriptive phrases (see Table V). More than 85 percent of the students indicated that the packages were easy to understand and allowed for self-pacing. Over 60 percent of the students thought the packages were interesting and liked having all information on a subject organized in one package. About half of the students liked being able to repeat material in the packages as many times as necessary in order to learn it, but 45 percent indicated that the packages were too time consuming. Twenty-four percent thought the required activities were just busy work. Fewer than 10 percent of the students indicated that the packages were repetitious and boring. Only four percent viewed activity questions in the packages as not helpful and only two percent indicated that illustrations and instructions were not clear. None of the students thought the packages were too difficult or the illustrations not helpful.

TABLE V

STUDENT REACTIONS TO THE SELF-PACED PACKAGES

Response	No. of Students	%
Easy to understand	42	86
Can move at my own pace	42	85
Interesting	31	63
All information on the subject organized in one package	31	61
Can repeat packages as many times as necessary	25	51
Too time consuming	22	45
Activities were just busy work	12	24
Repetitious	4	8
Boring	3	6
Activity questions throughout the reading not helpful	2	4
Instructions were unclear	1	2
Illustrations were unclear	1	2
Illustrations were not helpful	0	0
Too difficult	0	0

Students were asked to indicate whether they "liked" or "disliked" various aspects of the format of the self-paced learning packages.

	Liked		Disliked		(Omitted)	
Package Format	No.	%	No.	%	No.	%
Illustrations	48	98	0	0	1	2
Self-evaluation	45	92	3	6	1	2
Activity questions throughout reading	43	88	8	12	0	0
Listing of behavioral objectives	41	84	7	14	1	2
Listing of required activities	40	82	8	16	1	2
Listing of optional activities	33	67	14	29	2	4

These responses indicated that most students liked having a list of behavioral objectives and thought the activity questions presented throughout reading in the packages were helpful. None of the students disliked the illustrations. A large percentage (82%) of the students liked the listing of required activities, however, not as many students (67%) like the optional activities. Many of the students liked the self-evaluation.

A list of all required activities was included on the evaluation sheet and students were asked to check the ones they considered worthwhile (see Table VI). The activities students liked best were those in which they were to examine samples or look at pictures.

TABLE VI

LEARNING ACTIVITIES CONSIDERED WORTHWHILE BY STUDENTS

Learning Activity	No. of Students	%
Viewing examples of even and uneven plaids	44	90
Viewing examples of balanced and unbalanced stripes	44	90
Viewing examples of directional fabrics	41	84
Examining examples of grain, selvage, bias, etc. which were pointed out in relation to the piece of fabric	40	82
Determining the appropriate method for locating grain in sample fabrics	40	82
Locating courses and wales in the samples of knit fabric	39	80
Determining the right side of knit fabrics	37	76
Viewing sketches of hang, fit, and line	31	63
Viewing example of marking with pins and chalk	24	49
Identifying pattern markings which are to be transferred to cut fabric	24	49
Viewing examples of the two kinds of print fabrics which were discussed	24	49
Slip-basting and matching a sample piece of plaid or stripe fabric	23	47
Viewing example of marking with pins	22	45
Making tailor's tacks	21	43
Transferring markings by means of pins and chalk	16	33
Viewing example of testing stripes and placement of pattern pieces on stripes in The Vogue Sewing Book	15	31
Completing cutting technique rating sheet	13	27
Transferring markings by means of pins	13	27
Transferring pattern markings with the tracing wheel and carbon	10	20
Practicing folding the standard fabric positions	8	16
Practicing laying out the pattern	6	12

Students were asked to indicate whether their general interest, previous knowledge, and increase in knowledge of the entire unit was high, medium, or low. Student responses to this question are presented in the following chart.

Reaction	High		Medium		Low	
	No.	%	No.	%	No.	%
My general interest in this unit was . . .	19	39	28	58	2	4
My previous knowledge of the information presented in this unit was . . .	7	14	27	55	15	31
I feel my increase in knowledge of the material presented in this unit was . . .	26	53	21	43	2	4

Students indicated that general interest in the self-paced learning unit and previous knowledge of the information presented in the unit was "medium" for the majority of the group. Fifty-three percent of the students indicated that their increase in knowledge of the material presented in the unit was "high", and 43 percent indicated the increase as being "medium."

Students were asked to list the approximate time they spent on the entire unit. An average of three hours and eighteen minutes per person was spent in covering all four packages.

One objective of this study was to investigate the relationship between student attitude and (1) cumulative grade point average, (2) classification, and (3) major field of study. A student's attitude was regarded favorable if he indicated on the evaluation sheet that he preferred self-paced packages, and unfavorable if he preferred the lecture

method of instruction. Cumulative grade point average, classification, and major field of study for each student in the favorable and unfavorable groups are listed in Table VII. The student who indicated that she liked both methods of instruction is listed separately.

The average grade point for students who had a favorable attitude was 2.66, while the average grade point for students with an unfavorable attitude was 2.54. Results of a t-test conducted on the mean grade point averages for the favorable and unfavorable groups indicated that there was no significant difference between the two sample means. Of the 20 freshmen in the study 70 percent had a favorable attitude, as did approximately two-thirds of the 15 sophomores and eight juniors; only two (40%) of the five seniors had a favorable attitude. Two of the three students majoring in business and 27 of the 40 (67.5%) home economics majors had a favorable attitude. Only two of the five (40%) arts and science majors had a favorable attitude (see Table VIII, page 33).

TABLE VII

INDIVIDUAL STUDENT VARIABLES FOR STUDENTS IN THE FAVORABLE AND UNFAVORABLE GROUPS

Favorable				Unfavorable			
Student[a]	GPA	Class	Major[b]	Student[a]	GPA	Class	Major[b]
1	3.19	Fr	HE	32	2.57	Fr	HE
2	2.40	Fr	HE	33	2.50	Fr	HE
3	2.36	Fr	HE	34	2.67	Fr	HE
4	2.50	Fr	HE	35	2.44	Fr	HE
5	2.53	Fr	HE	36	2.33	Fr	HE
6	2.64	Fr	HE	37	1.71	Fr	AS
7	3.56	Fr	HE	38	3.27	So	HE
8	2.31	Fr	HE	39	2.84	So	HE
9	2.60	Fr	HE	40	2.62	So	HE
10	3.00	Fr	HE	41	2.35	So	HE
11	1.59	Fr	HE	42	1.89	So	HE
12	2.40	Fr	HE	43	2.88	Jr	HE
13	2.92	Fr	AS	44	2.36	Jr	HE
14	2.69	Fr	AS	45	2.35	Jr	HE
15	3.00	So	Bus	46	2.12	Sr	Bus
16	1.71	So	Bus	47	2.43	Sr	AS
17	2.02	So	HE	48	3.86	Sr	AS
18	3.40	So	HE				
19	3.17	So	HE				
20	2.54	So	HE				
21	2.02	So	HE				
22	2.08	So	HE				
23	2.45	So	HE				
24	3.59	So	HE				
25	3.37	Jr	HE				
26	1.94	Jr	HE				
27	3.23	Jr	HE				
28	2.76	Jr	HE				
29	3.48	Jr	HE				
30	2.12	Sr	HE				
31	2.86	Sr	HE				

[a]The one student who indicated she liked both lecture and self-paced packages had a GPA of 1.45, was a freshman, and was a home economics major.

[b]HE - Home Economics, AS - Arts and Sciences, Bus - Business.

TABLE VIII

AVERAGE CUMULATIVE GRADE POINT, CLASSIFICATION AND MAJOR OF STUDENTS IN THE FAVORABLE AND UNFAVORABLE GROUPS

Item	Total Group	Favorable		Unfavorable	
Average GPA*		2.66		2.54	
Classification		N	%	N	%
Freshman	20	14	70	6	30
Sophomore	15	10	66.7	5	33.3
Junior	8	5	62.5	3	37.5
Senior	5	2	40	3	60
Major		N	%	N	%
Home Economics	40	27	67.5	13	32.5
Business	3	2	66.7	1	33.3
Arts and Sciences	5	2	40	3	60

*The t-ratio of -.73696 was not significant (df=46).

Pretest and Post-test Item Analysis

The pretest and post-test was scored by computer and each test was subjected to an item analysis. In an item analysis each test item is examined for the purpose of discovering its strengths and flaws. Two features of an item analysis are level of difficulty and discriminating power. Level of difficulty refers to the percentage of students who answered each test item correctly; discriminating power is the ability of each test item to differentiate between students who obtained a high score on the examination and those who obtained a low score on the test (1, p. 184).

According to Ahmann and Glock (1, pp. 190-191),

> All items of extremely high or low levels of difficulty should be carefully scrutinized. Since any test items with levels of difficulty that are not in the general vicinity of 50 percent (that is, between 40 and 70 percent) tend to reduce the discriminating power of the test, these can be viewed with suspicion.

On the pretest only 30 percent of the test items had a difficulty level between 40 and 70 percent, 48 percent had a difficulty level of above 70 percent, and 22 percent had a difficulty level below 40 percent. The average difficulty level was 62.6. On the post-test only 30 percent of the test items had a difficulty level between 40 and 70 percent, 64 percent had a difficulty level above 70 percent, and six percent had a difficulty level below 40 percent. The average difficulty level was 73.8. In Table IX, page 35, the difficulty level of each of the 50 items on both the pretest and post-test is shown.

Items with maximum discriminating power would be those which every student in the top 27 percent of the class answered correctly and every student in the bottom 27 percent of the class answered incorrectly. According to Ahmann and Glock (1, p. 191), test item discriminating values above +0.40 are good, values between +0.40 and +0.20 are satisfactory, and values below +0.20 are poor. None of the values should be negative as negative values identify items which differentiate between students in the wrong direction. In a well-built classroom achievement test, more than 50 percent of the test items should have discriminating values above +0.40, 40 percent of the test items should have values between +0.40 and +0.20, and less than 10 percent of the items should have values of +0.20 and below. Table X, page 36, shows the discriminating value of the 50 items on the pretest and post-test.

TABLE IX

DIFFICULTY LEVEL OF PRETEST AND POST-TEST ITEMS

Item Number	Pretest		Post-test	
	Number Correct Responses	Difficulty Percent	Number Correct Responses	Difficulty Percent
1	35	71.4	42	85.7
2	25	51.0	45	91.8
3	23	46.9	38	77.6
4	23	46.9	24	49.0
5	7	14.3	18	36.7
6	46	93.9	36	73.5
7	13	26.5	39	79.6
8	45	91.8	22	44.9
9	48	98.0	24	91.8
10	36	73.5	40	81.6
11	33	67.3	14	28.6
12	24	49.0	44	89.8
13	44	89.8	20	40.8
14	39	79.6	49	100.0
15	28	57.1	49	100.0
16	41	83.7	43	87.8
17	0	0.0	43	87.8
18	18	36.7	48	98.0
19	26	53.1	47	95.9
20	16	32.7	42	85.7
21	29	59.2	36	73.5
22	21	42.9	35	71.4
23	48	98.0	23	46.9
24	13	26.5	34	69.4
25	28	57.1	42	85.7
26	33	67.3	26	53.1
27	40	81.6	6	12.2
28	44	89.8	28	57.1
29	20	40.8	40	81.6
30	19	38.8	36	73.5
31	38	77.6	40	81.6
32	20	40.8	28	57.1
33	37	75.5	23	46.9
34	7	14.3	36	73.5
35	43	87.8	38	77.6
36	22	44.9	42	85.7
37	46	93.9	28	57.1
38	46	93.9	26	53.1
39	22	44.9	26	53.1
40	45	91.8	42	85.7
41	42	85.7	38	77.6
42	41	83.7	49	100.0
43	40	81.6	38	77.6
44	40	81.6	49	100.0
45	4	8.2	49	100.0
46	10	20.4	38	77.6
47	43	87.8	37	75.5
48	2	4.1	32	65.3
49	42	85.7	25	51.0
50	47	95.9	32	65.3

TABLE X

DISCRIMINATING POWER OF PRETEST AND POST-TEST ITEMS

Item Number	Pretest		Post-test	
	Discrimination (Percent)	Rating*	Discrimination (Percent)	Rating*
1	0.44	Good	0.19	Poor
2	0.50	Good	0.13	Poor
3	0.06	Poor	0.19	Poor
4	0.06	Poor	0.13	Poor
5	-0.13	Negative	0.19	Poor
6	0.13	Poor	0.13	Poor
7	0.06	Poor	0.38	Satisfactory
8	0.25	Satisfactory	0.19	Poor
9	0.06	Poor	0.19	Poor
10	0.19	Poor	0.19	Poor
11	0.25	Satisfactory	0.25	Satisfactory
12	0.19	Poor	0.31	Satisfactory
13	0.0	Poor	0.25	Satisfactory
14	0.13	Poor	0.0	Poor
15	0.50	Good	0.0	Poor
16	0.38	Satisfactory	0.0	Poor
17	0.0	Poor	0.0	Poor
18	0.25	Satisfactory	0.06	Poor
19	0.19	Poor	-0.06	Negative
20	0.31	Satisfactory	0.25	Satisfactory
21	0.38	Satisfactory	0.25	Satisfactory
22	0.25	Satisfactory	0.31	Satisfactory
23	0.06	Poor	0.38	Satisfactory
24	0.06	Poor	-0.13	Negative
25	0.63	Good	0.25	Satisfactory
26	0.13	Poor	0.50	Good
27	0.06	Poor	0.06	Poor
28	0.13	Poor	-0.06	Negative
29	-0.06	Negative	0.06	Poor
30	0.44	Good	0.38	Satisfactory
31	0.06	Poor	0.25	Satisfactory
32	0.25	Satisfactory	0.25	Satisfactory
33	0.13	Poor	0.63	Good
34	0.0	Poor	0.56	Good
35	0.06	Poor	0.25	Satisfactory
36	0.63	Good	0.06	Poor
37	0.19	Poor	0.13	Poor
38	0.19	Poor	0.50	Good
39	0.50	Good	-0.13	Negative
40	0.06	Poor	0.0	Poor
41	0.44	Good	0.25	Satisfactory
42	0.31	Satisfactory	0.0	Poor
43	0.38	Satisfactory	0.38	Satisfactory
44	0.38	Satisfactory	0.0	Poor
45	0.06	Poor	0.0	Poor
46	0.31	Satisfactory	0.38	Satisfactory
47	0.06	Poor	0.31	Satisfactory
48	0.06	Poor	0.50	Good
49	0.19	Poor	0.56	Good
50	0.13	Poor	0.44	Good

*Discriminating values above +0.40 are considered good, values between +0.40 and +0.20 are considered satisfactory, and values between +0.20 and 0 are considered poor. Negative values discriminate in the wrong direction. (1, 191)

On the pretest, 16 percent of the items had good discriminating values, 24 percent had satisfactory discriminating values, and 56 percent had poor discriminating values. Four percent of the items had negative discriminating values. On the post-test, 14 percent of the items had good discriminating values, 34 percent had satisfactory discriminating values, and 44 percent had poor discriminating values. Eight percent had negative discriminating values.

Based on the data from the item analysis, both the pretest and post-test can be considered questionable measuring devices. The average difficulty level on the pretest (62.6) was acceptable, however, the average difficulty level on the post-test (73.8) was too high. On both the pretest and post-test, the percentage of items having a good discriminating value was too low and the percentage of items having a poor discriminating value was too high.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to develop and evaluate a self-paced learning unit, Getting Started: Cutting Your Garment.

Two objectives of the study were: (1) to develop a self-paced learning unit for use in Basic Clothing Construction, and (2) to determine the effectiveness of the unit by measuring gain in student achievement through use of a pre-post test. Four packages were developed: (1) preparation of fabrics for cutting, (2) pattern layout techniques, (3) cutting special fabrics, and (4) transferring pattern markings. A pretest was given to all students enrolled in CTM 1103, Basic Clothing Construction, at Oklahoma State University, spring, 1972. The self-paced learning unit was then presented to all students enrolled in the course, and a post-test was given upon completion of the ten-day unit. It was hypothesized that students' post-test mean scores would be significantly higher than their pretest mean scores. Results of a t-test conducted on the mean scores indicated a significant difference at the .001 level of confidence.

Another objective of the study was to investigate the degree of correlation which exists between percent of gain on the post-test and (1) cumulative grade point averages, (2) ACT English scores, and (3) ACT composite scores. Students' grade point averages, ACT English scores, and ACT composite scores were compared with their percent of

gain on the post-test. No significant correlation was found.

Two other objectives were: (1) to design an instrument for determining student attitude toward the self-paced learning unit and (2) to investigate the relationship between student attitude and cumulative grade point average, classification, and major field of study. An evaluation sheet was developed which students filled out upon completion of the unit. A student's attitude was regarded as favorable if he indicated on the evaluation sheet that he preferred self-paced learning packages, and unfavorable if he preferred the lecture method of instruction.

Results of a t-test conducted on the mean grade point averages for the favorable and unfavorable groups indicated that there was no significant difference between the means of the two groups. Freshmen had the most favorable attitude toward the self-paced learning packages and seniors had the least favorable attitude. Home economics and business majors had a more favorable attitude than the arts and science majors; however, since only a small percentage (17%) of the students were business and arts and science majors, results were inconclusive. Student comments toward the self-paced learning packages were generally favorable.

Conclusions

1. Results of a t-test indicated that students' post-test mean scores were significantly higher than their pretest mean scores.

2. No significant degree of correlation existed between percent of gain in student achievement on the post-test and cumulative grade point averages, ACT English scores, and ACT composite scores.

3. There was little or no relationship between student attitude and cumulative grade point average, classification, and major field of study.

Recommendations

1. Replicate this study using a larger sample.

2. Repeat the study and measure retention of learning after a sufficient lapse of time.

3. Repeat the study and measure transfer of student learning from self-paced packages to classroom situations.

4. Conduct a similar study and include more diverse multi-sensory materials in package learning activities (single concept films, slides, etc.).

5. Redesign the pretest and post-test using data from the item analysis conducted in this study.

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APPENDIX A

SELF-PACED LEARNING PACKAGES

GETTING STARTED: CUTTING YOUR GARMENT

PREPARATION OF FABRICS FOR CUTTING

Package No. I

TO BE USED IN CONJUNCTION WITH THE BOX OF MATERIALS IN THE LEARNING CENTER. ASK FOR BOX NO. I, "PREPARATION OF FABRICS FOR CUTTING."

RATIONALE

How many times have you seen a pretty piece of fabric ruined or the lines of a garment look sloppy because the seams did not fall in the correct place? And how about that favorite dress you made that shrank after it was cleaned? Disasters such as these can be prevented by properly preparing the fabric before the garment is cut. Careful preshrinking and straightening of grainline in your fabric are two of the first steps which help to guarantee that your finished garment will fit properly and make you proud to wear it.

Behavioral objectives are listed on the next page; read them carefully. When you finish this package you should be able to do everything which is specified in the objectives.

BEHAVIORAL OBJECTIVES

Upon completion of this package you will be able to:

1. ...list three factors which are affected by grain of fabric and indicate how these three factors (hang, fit, line) are affected by grain position.

2. ...define or identify the following terms:

   a. grain
   b. selvage
   c. lengthwise grain
   d. crosswise grain
   e. garment bias
   f. true bias
   g. off-grain
   H. on-grain
   i. courses
   j. wales

3. ...name three methods of locating grain in fabric and indicate which method is appropriate for a specific type of fabric.

4. ...describe several methods for straightening fabric grain and determine the appropriate method for straightening specific fabrics.

5. ...describe four ways by which fabrics may be preshrunk and determine the appropriate method for preshrinking given fabrics.

INSTRUCTIONS

On the following pages the behavioral objectives are listed again separately. Under each is a list of learning activities for that objective. Do all of the required activities; if you feel you need further guidance, proceed through the activities listed under "Optional" activities. Complete all of the learning activities listed for behavioral objective no. 1 before proceeding to behavioral objective no. 2, etc. Required activities for each objective should be completed in the order in which they are listed.

If you have a question at any time, feel free to consult with your teacher. She will be glad to answer any questions which you may have over this material.

BEHAVIORAL OBJECTIVE NO. 1:

You will be able to list three factors which are affected by grain of fabric and indicate how these three factors (hang, fit, and line) are affected by grain position.

LEARNING ACTIVITIES:

Required:

1. Read "Grain in Fabric" below and answer questions which accompany the reading.

2. Look at the sketches illustrating hang, fit, and line which have been placed in the learning center. (Box I)

Optional:

1. Read "How Grain Affects The Behavior of Fabric" on page 16 of Smart Sewing by Catherine M. Doerr.

GRAIN IN FABRIC

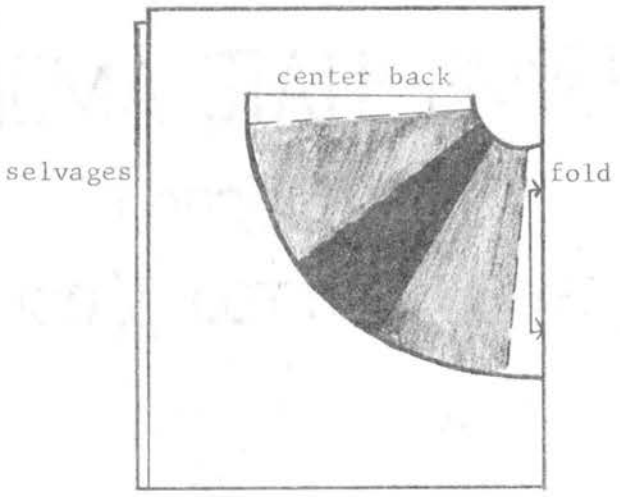
Fabric direction is called grain. Examine the piece of fabric in your package. You will see that the yarns of the fabric run in two directions, lengthwise and crosswise, and that the yarns cross each other at right angles. These yarns are known as the grain of the fabric and affect the behavior of fabric. In turn the appearance of the garment is affected by the position of the grain.

Grain must be understood by a designer in order to create the desired effect in a garment. Hang, fit, and the structural lines of a garment are affected by grain. If yarns in the fabric of a garment are off-grain the garment will not hang evenly and will sag to one side. Neither will it fit properly because one part of the garment will tend to bag while other parts may draw too tightly.

The lengthwise grain in fabric is more stable and has less give than the crosswise grain. Therefore, the lengthwise grain is usually placed vertically on the body. However, some garment designs require variation in grain direction. Garments which are cut on the bias will have a tendency to stretch, because the garment bias, especially the true bias, has a great deal of give.

ACTIVITY

Below is a drawing of a half circle skirt pattern which has been properly placed on a piece of fabric. The center front of the pattern has been placed on the fold (lengthwise grain) and the center back is parallel to the crosswise grain. The shaded area of the pattern is on the garment bias. The darker shaded area is on and close to the true bias of the fabric. This is unavoidable when making this style of skirt. What may happen after the garment is constructed and worn? What might you do to help alleviate the problem? The answers to these questions may be found on the next page.



ANSWER:

After the garment is constructed and worn, the part of the skirt which is on the garment bias--especially the true bias--may stretch. Therefore, the garment will hang unevenly. The extent to which it will stretch will depend upon the nature of the fabric. Before the hem is marked and sewn in a garment such as this, it is best to let it hang on a hanger for a period of time so that the fabric can stretch as much as possible.

IF YOU ANSWERED THESE QUESTIONS INCORRECTLY REREAD "GRAIN IN FABRIC."

BEHAVIORAL OBJECTIVE NO. 2:

You will be able to define or identify the following terms:

a. grain
b. selvage
c. lengthwise grain
d. crosswise grain
e. garment bias
f. true bias
g. off-grain
h. on-grain
i. courses
j. wales

LEARNING ACTIVITIES:

Required:

1. Read "Fabric Preparation" below.

2. Study Figures 4-3 and 4-4 on page 17 of Smart Sewing by Catherine M. Doerr.

3. Study the terms in relation to the piece of fabric which has been placed in Box No. I.

Optional:

1. Read pages 1 and 2 in the pamphlet "Grain in Fabric" in Box No. I.

FABRIC PREPARATION

Preparation of fabric for cutting may include one or all of the following steps: (1) locating grain, (2) straightening grain, (3) preshrinking the fabric, and (4) pressing. The following terms are often referred to in regard to fabric preparation and you should know and understand their meaning.

Selvage: The finished woven edge of fabric which runs parallel to the lengthwise grain.

Grain: The direction or arrangement of the yarns in a fabric.

Lengthwise grain: Vertical or warp yarns which run parallel to the fabric selvage in woven fabrics.

Crosswise grain: Horizontal yarns referred to as the "weft" or "filling". These yarns are perpendicular to the selvage in woven fabrics.

Garment bias: A diagonal which runs across the lengthwise and crosswise grain.

True bias: A diagonal which is at a forty-five degree angle to the selvage.

On-grain: Lengthwise and crosswise yarns are at right angles to each other.

Off-grain: Lengthwise and crosswise yarns are not at right angles to each other.

Courses: Crosswise rows in knitted fabrics.

Wales: Lengthwise rows which run the length of knitted fabrics.

BEHAVIORAL OBJECTIVE NO. 3:

You will be able to name three methods of locating grain in fabric and indicate which method is appropriate for a specific type of fabric.

LEARNING ACTIVITIES:

Required:

1. Read "Locating Grain" below.
2. Determine which method is appropriate for locating grain in each of the six samples of fabric in Box No. I.

Optional:

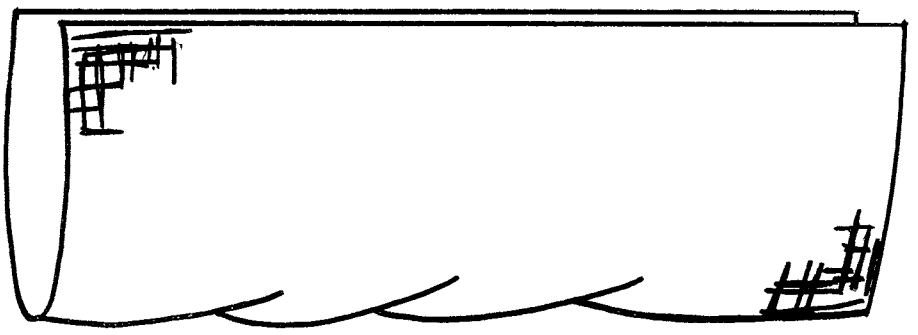
1. Read "Straightening the Fabric" on page 56 of Smart Sewing by Catherine M. Doerr.

LOCATING GRAIN

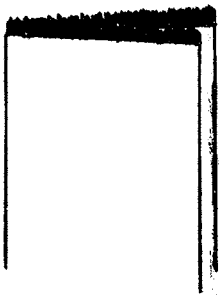
In order to check grain position it is first necessary to locate the crosswise grain. This may be done by one of three methods, depending on the nature and weave of the fabric: (1) tearing the fabric, (2) pulling a yarn which may guide you while cutting on the crosswise grain, or (3) cutting beside a visible crosswise yarn. Fabrics may be torn if the weave is not affected by the tearing. Most cotton fabrics can be torn as well as some wools. However, it is best to locate grain in wool fabrics by pulling a yarn. Linens can not be torn; therefore, a yarn must be pulled to locate the grain.

Grain can be located in fabrics which contain, or are made from, synthetic fibers by one of the three methods mentioned previously. The weave and nature of the fibers in the fabric will determine which is best. It should be noted that at times the presence of certain synthetic fibers or the application of certain finishes to a fabric may make it difficult to tear fabric.

To check to see if the lengthwise and crosswise yarns are perpendicular, fold the fabric lengthwise placing selvages together. If the grain position is correct, the crosswise ends will match evenly and will be at right angles to the selvage and fold of the fabric. Ripples along the fold indicate that the fabric is off-grain. Grain position may be checked another way by placing the fabric on a table with square corners. If the fabric is on-grain the selvages will be parallel to one side of the table and the crosswise yarns parallel to the adjacent side of the table. This technique is suitable for knits as well as other fabrics.



Ripples Indicate Grainline Imperfection



Grainline imperfection is indicated if fabric ends do not match evenly and are not at right angles to the selvage and fold of the fabric after fabric edges have been straightened on both ends.

BEHAVIORAL OBJECTIVE NO. 4:

You will be able to describe several methods for straightening fabric grain and determine the appropriate method for straightening specific fabrics.

LEARNING ACTIVITIES:

Required:

1. Read "Straightening Grain" below and refer to the drawings in Figures 1 and 2. Answer all questions which accompany the reading.

2. Locate the courses and wales in the pieces of knit fabrics which have been placed in Box No. I.

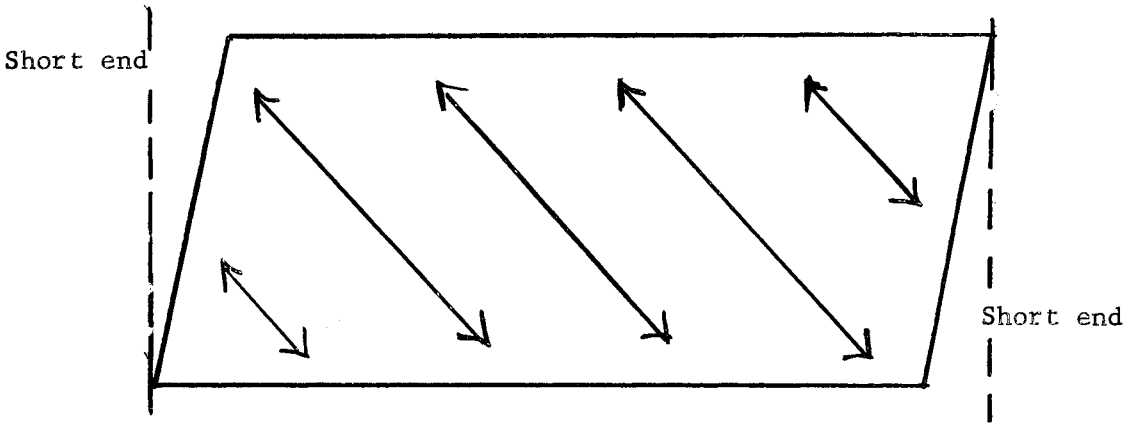
Optional:

1. Read "Preparing Fabrics For Grainline Perfection" in the pamphlet Grain in Fabric in Box No. I.

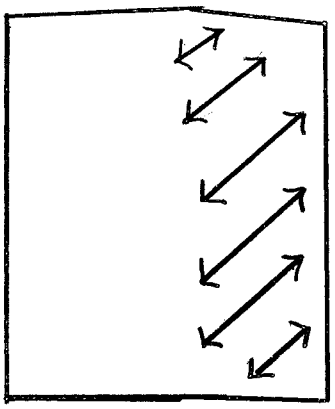
STRAIGHTENING GRAIN

Grain position in some fabrics may be corrected by pulling the short ends on the true bias about every six inches (Fig. 1). This is the quickest and easiest way to restore grain position in most cotton and silk fabrics. Linen fabrics can usually be straightened by smoothing the fabric with the hands.

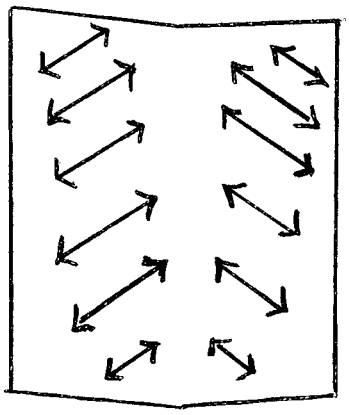
Fabrics which have been finished off-grain with a semi-permanent finish cannot be straightened. They must be used as they are. Yarns in durable press fabrics are permanently set during the finishing process. This makes it impossible to restore a right angle structure to the yarns. Due to the finish it is unlikely that the garment will hang unevenly even though the fabric is off-grain. However, the defect may be noticeable if the yarns are coarse and easily visible. It may also prove to be a problem in matching if the fabric is a plaid or large check.



Fabric is squared by pulling in the direction of the short ends--on the bias every six inches.



If a portion of the fabric is in perfect condition, straighten only the incorrect side as indicated by the arrows.



If crosswise yarns are out of line, changing at the center of the fabric, fabric could be folded lengthwise and both sides of the fabric stretched at once.

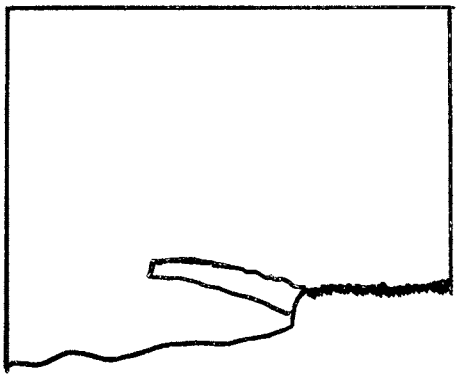
Figure 1. Straightening Grain by Pulling on the True Bias

Bonded fabrics which are bonded off-grain cannot be straightened and it is best not to purchase such fabrics. If the fabric face is bonded on-grain, you need not worry about the direction of the tricot knit as it will stretch in all directions and not affect the appearance of the garment. However, if the backing is woven, be sure both the fabric face and backing are bonded on-grain.

Wool fabrics which are only slightly off-grain can be straightened by steaming with an iron while smoothing with the hands. Before steaming the fabric be sure that the ends are yarn perfect and that the fabric is folded lengthwise with all edges basted together. Otherwise, if a wool fabric is off-grain straighten it by the wet-cloth method. To do this wet a sheet and wring it out. Put half the sheet lengthwise on a flat surface and place half of the wool lengthwise on the sheet (Fig. 2). Fold the other half of the sheet over the wool and the remaining half of the wool over the top of the sheet. Roll it up with the sheet to the outside and let it stand for several hours until the wool is moistened. Unfold, smooth, and pull the wool on-grain allowing it to dry thoroughly before cutting.

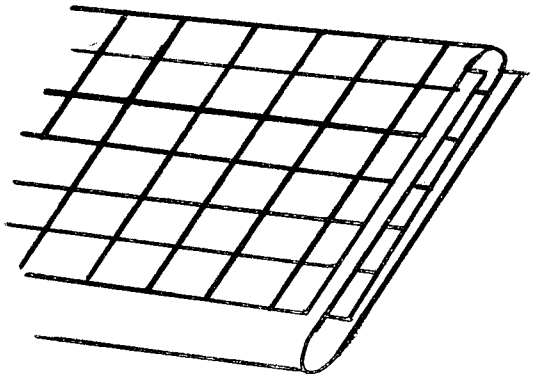
In knit fabrics if the courses and wales are not at right angles to each other the fabric should be straightened. Straighten knits by one of the regular methods mentioned in the previous paragraphs. The fiber content of your fabric will dictate the method to be used. Remember: any knit fabric which was treated with a durable press finish when the courses and wales were not at a ninety degree angle to each other cannot be straightened. The durable press finish sets the yarns, therefore the knit fabric must be used as it is.

1. Cut or tear fabric to check grainline.



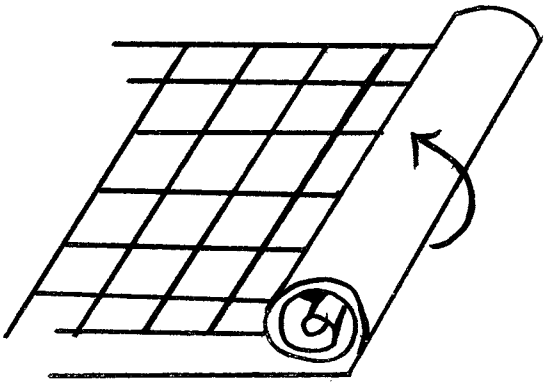
2. Dampen a sheet.

3.



Fold the sheet and fabric in the manner specified.

4.



Roll fabric and sheet carefully.

5. Smooth fabric and stretch lightly to straighten the grain.

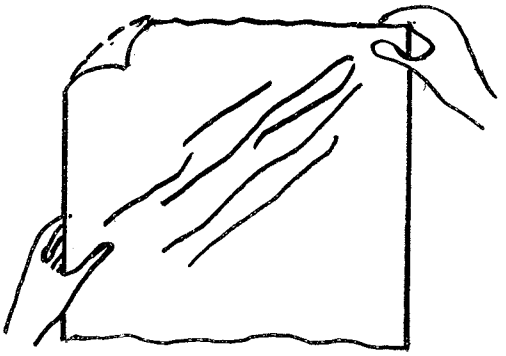


Figure 2. Straightening Non-Washable Fabrics

Many times knit fabrics are sold in a tubular form. When in tubular form the courses on the two halves of the fabric are not perfectly parallel with each other but are at a slight angle. To prepare the fabric, cut the tube along a rib and press out the lengthwise fold. Baste along a rib near the center fold to mark the straight of the fabric.

ACTIVITY

Answer the following questions. After you have answered the questions check your answers with the correct responses below.

Question A: Assume you have purchased a permanent press polyester/cotton blend plaid fabric. After determining the grainline you find that the plaid design has been printed off-grain. How should you prepare this fabric?

(a) Straighten the fabric so that the plaid follows the grain.
(b) Cut all pattern pieces following the grainline so that the finished garment will hang properly.
(c) Cut all pattern pieces matching the plaid design, as the fibers were set by the durable press finish which makes it unlikely that the finished garment will hang unevenly.
(d) None of the above are correct.

Question B: While selecting bonded fabric for a skirt you discover that the fabric has been bonded off-grain, however the tricot backing is on-grain. You should...

(a) ...select another piece of fabric as it is likely that the finished garment will hang unevenly.
(b) ...buy the fabric and restore the right angle structure of the fabric.
(c) ...buy the fabric and use it as it is. Since the tricot backing is on-grain you will have no problem with the finished garment stretching unevenly.
(d) None of the above are correct.

ANSWERS:

A. c
B. a

IF YOU ANSWERED EITHER OF THE ABOVE QUESTIONS INCORRECTLY REREAD "STRAIGHTENING GRAIN".

BEHAVIORAL OBJECTIVE NO. 5:

You will be able to describe four ways by which fabrics may be preshrunk and determine the appropriate method for preshrinking given fabrics.

LEARNING ACTIVITIES:

Required:

1. Read "Preshrinking Fabrics" below and answer all questions which follow the reading.

Optional:

1. Read pages 134-136 in Principles For Creating Clothing by Warden, Golding, and Stam. This will be found in Box No. I.

PRESHRINKING FABRICS

Today almost all fabrics are preshrunk before they reach the consumer. However, it is wise to check the specified amount of shrinkage control when purchasing fabric and if it is more than one percent it is wise to shrink the fabric before using it. Knit fabrics should always be preshrunk before cutting. Most fabrics, including knits, can be adequately shrunk by treating them with the process by which they will eventually be cleaned. Washable cotton and linen fabrics may be soaked or washed. Nonwashable fabrics (most wools) may be shrunk by professional drycleaners, or they may be steam pressed by holding a steam iron two to three inches above the fabric. The wet-cloth or "London shrink" method works well on nonwashables which will not water spot. The fabric is folded lengthwise and basted on the side and ends, then rolled up in a dampened sheet for several hours. Then the damp fabric is removed from the sheet and laid on a flat surface. Before it is allowed to dry, it should be patted smooth and the crosswise grain checked to see if it is at right angles to the lengthwise grain.

For best results in preshrinking silk, send it to a reputable drycleaner.

ACTIVITY

Answer the following questions. Check with the correct answers below.

A. What similarities do you see between one of the methods for straightening fabric grain and one method for preshrinking fabric?

B. Under each of the following four boxes containing names of fabrics place the letter representing the best method for preshrinking and the best method for straightening the grain of the fabric.

Silk Shantung	Cotton Broadcloth	Wool Flannel	Woven Linen
_____	_____	_____	_____

Methods for preshrinking:
- A. Professional drycleaners, wet-cloth method
- B. Soak or wash
- C. Professional drycleaners
- D. Soak, wash, or professional drycleaners

Methods for straightening grain:
- E. Pulling short ends of fabric
- F. Steaming with an iron, wet-cloth method
- G. Smoothing with the hands
- H. Cannot be straightened

ANSWERS:

A. The wet-cloth method is used to both straighten fabric grain and preshrink fabrics. However, there is an added step when preshrinking--folding the fabric lengthwise and basting along the sides and ends of the fabric. This is to prevent the fabric from shrinking unevenly.

B. Silk shantung - C,E
Cotton broadcloth - B,E
Wool flannel - A,F
Woven linen - D,G

IF YOU ANSWERED ANY OF THE QUESTIONS INCORRECTLY REREAD "STRAIGHTENING GRAIN" AND "PRESHRINKING FABRICS" ON PREVIOUS PAGES OF THIS PACKAGE.

WHEN YOU FEEL YOU KNOW THE MATERIAL PRESENTED IN THIS PACKAGE TURN TO THE NEXT PAGE FOR YOUR SELF-EVALUATION!

SELF-EVALUATION

1. If a dress is cut from fabric which is off-grain the three factors which are affected are: _____, _____, and _____.

2. If a pattern which is to be laid on the fabric on-grain is improperly placed or if the garment is cut from fabric which is off-grain what may happen after the garment is constructed and worn?

3. List the procedures used in the wet-cloth method of straightening fabrics.

TRUE OR FALSE

Directions: The following statements are either True or False. Write your answer to the left of each question. If you answer "False," briefly tell why!

_____ 4. Wool fabrics which are only slightly off-grain should be straightened by the wet-cloth method.

_____ 5. Fabrics which have been finished with a durable press finish cannot be straightened if they are off-grain.

_____ 6. Knit fabrics which are off-grain should be straightened by one of the regular methods for straightening fabrics. The fiber content will dictate the method to be used.

_____ 7. The wet-cloth method is one method which can be used to preshrink cotton fabrics.

_____ 8. Knit fabrics do not need to be preshrunk before they are cut.

_____ 9. Most fabrics can be adequately shrunk by treating them with the process by which they will eventually be cleaned.

_____10. "London-shrink" is another name for the wet-cloth method of shrinking non-washable fabrics which will not water spot.

MATCHING

11-20. Match the following definitions with the appropriate term to the right.

_____11. Refers to the direction or arrangement of the yarns of the fabric.

_____12. Lengthwise and crosswise yarns are not at right angles to each other.

_____13. Only a true diagonal which is at a forty-five degree angle to the selvage.

_____14. Lengthwise and crosswise yarns are at right angles to each other.

_____15. The finished woven edge of cloth which runs parallel to the lengthwise grain.

_____16. The yarns that run parallel to the fabric selvage in woven fabrics.

_____17. A diagonal which runs across the lengthwise and crosswise grain but not at a 45° angle to the selvage.

_____18. The yarns which run perpendicular to the selvage in woven fabrics.

_____19. Lengthwise rows which run the length of knitted fabrics.

_____20. Crosswise rows in knitted fabrics.

A. Selvage

B. Grain

C. Lengthwise Grain

D. Crosswise Grain

E. Wales

F. Off-Grain

G. Garment Bias

H. Courses

I. True Bias

J. On-Grain

21. Listed below are three fabrics and three methods for locating grainline. Match each method with the fabric(s) for which it is appropriate.

_____ Tearing

_____ Pulling a thread

_____ Cutting beside a visible thread

A. Linen

B. Cotton

C. Wool

22-27. Methods for preshrinking fabrics are listed below. Use them to answer questions 22 through 27.

A. Soaking or washing

B. "London shrink" method

C. Professional drycleaning

D. Holding a steam iron two to three inches above the fabric

_____22. Which method or methods is/are appropriate for preshrinking non-washable fabrics?

_____23. Which method or methods is/are appropriate for preshrinking washable fabrics?

_____24. Which method or methods is/are appropriate for preshrinking wool?

_____25. Which method or methods is/are appropriate for preshrinking cotton?

_____26. Which method or methods is/are appropriate for preshrinking silk?

_____27. Which method or methods is/are appropriate for preshrinking linen?

TURN TO THE NEXT PAGE FOR THE SELF-EVALUATION ANALYSIS.

SELF-EVALUATION ANALYSIS

Check your test and if you answer all questions correctly, then you are ready for the post test. The post test will be given later. If you miss any questions, go back to the appropriate section of the package and reread. Follow through by doing the appropriate "Optional" learning activities which are listed. If you have any questions, feel free to consult with your teacher.

ANSWERS:

1. hang, fit, line

2. The garment may bag, sag, or stretch out of shape.

3. Wet a sheet and wring it out. Put half the sheet lengthwise on a flat surface and place half the wool lengthwise on the sheet. Fold the other half of the sheet over the wool and the remaining half of the wool over the top of the sheet. Roll it up with the sheet to the outside and let it stand for several hours until the wool is moistened. Unfold, smooth, and pull the wool on-grain allowing it to dry thoroughly before cutting.

4. False. Wool fabrics which are only slightly off-grain can be straightened by steaming with the iron while smoothing with the hands.
5. True
6. True.
7. False. The wet cloth method is used to preshrink wool fabrics.
8. False. Knit fabrics should always be preshrunk.
9. True.
10. True.

11. B
12. F
13. I
14. J
15. A
16. C
17. G
18. D
19. E
20. H
21. BC Tearing (Tearing is not appropriate for all wool fabrics.)
    ABC Pulling a thread
    ABC Cutting beside a visible thread

22. B, C, D
23. A
24. B, C, D
25. A
26. C
27. A, B, C

GETTING STARTED: CUTTING YOUR GARMENT

PATTERN LAYOUT TECHNIQUES

Package No. II

TO BE USED IN CONJUNCTION WITH THE BOX OF MATERIALS IN THE LEARNING CENTER. ASK FOR BOX NO. II, "PATTERN LAYOUT TECHNIQUES."

RATIONALE

Knowing how to lay out a pattern properly on fabric is important if you wish to be a successful seamstress. The way in which a pattern is laid on the fabric will eventually affect the hang and fit of the garment. Knowing how to interpret pattern markings is also important as costly mistakes can be made if you do not place each pattern piece on the fabric properly. After the fabric is cut there is no turning back; therefore, it is advisable that you double check every pattern piece which you have pinned on the fabric. Awareness of proper layout techniques saves much time and sends you on your way to having a garment which you will be proud to wear.

Behavioral objectives are listed on the next page; read them carefully. When you finish this package you should be able to do everything which is specified in the objectives.

BEHAVIORAL OBJECTIVES

Upon completion of this package you will be able to:

1. ...identify four factors which determine the pattern layout to be used.

2. ...identify the following five standard fabric positions for layouts:

   a. lengthwise fold
   b. crosswise fold
   c. open
   d. double fold
   e. combination fold

3. ...determine whether pattern pieces on a diagram of a given layout are placed correctly; if they are not placed correctly state how corrections are to be made.

4. ...identify several "pointers" for pinning a pattern on fabric.

5. ...identify eight general techniques which should be followed when cutting out a garment.

INSTRUCTIONS

On the following pages the behavioral objectives are listed separately. Under each is a list of learning activities for that objective. Do all of the required activities; if you feel you need further guidance, proceed through the activities listed under "Optional". Complete all of the learning activities for behavioral objective no. 1 before proceeding to behavioral objective no. 2, etc. Required activities for each objective should be completed in the order in which they are listed.

If you have a question at any time, feel free to consult with your teacher. She will be glad to answer any questions which you may have over this material.

BEHAVIORAL OBJECTIVE NO. 1:

You will be able to identify four factors which determine the pattern layout to be used.

LEARNING ACTIVITIES:

Required:

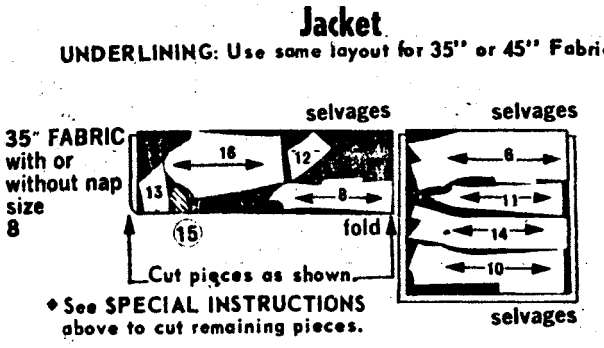
1. Read "Choosing The Pattern Layout" below.
2. Study the example entitled "Choosing A Pattern Layout in Figure 1 on page 71 and answer the question pertaining to the pictured layouts.

CHOOSING THE PATTERN LAYOUT

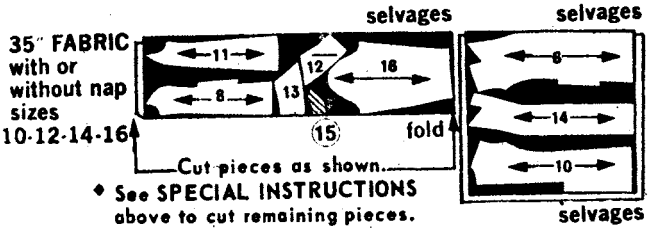
After you have fitted your pattern, made necessary alterations, and prepared your fabric properly, you are ready to lay out your pattern. You will find your pattern cutting guide helpful; by using it you will save time and will be assured that you are properly laying out your pattern. The same four factors which influence the amount of yardage required will also determine the layout to be used: the view of the design, pattern size, fabric width, and the nature of the fabric. After the correct layout has been selected on your guide sheet, circle it so that the layout can be quickly located when you need to refer to it. Experienced seamstresses may choose not to use the pattern guide if they see a better solution, but in general beginners should follow it carefully.

You have purchased a size 12 pattern and red velvet fabric (35 in. wide) from which you are going to make a jacket. Which of the following layouts should you use to cut your garment? (The answer may be found at the bottom of the page.)

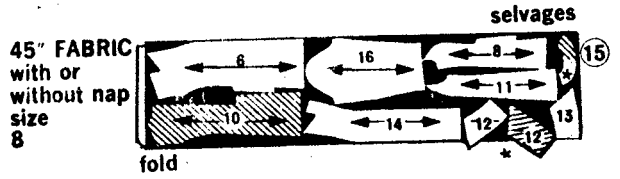
A



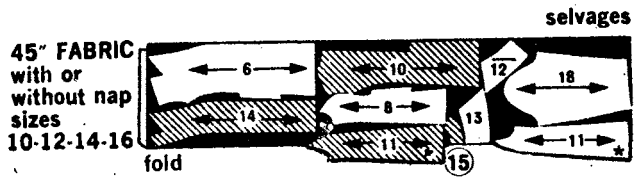
B



C



D



E

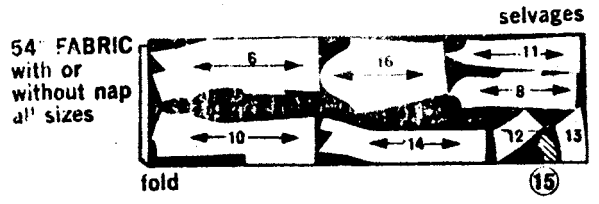


Figure 1. Choosing a Pattern Layout

Layout B is correct as it is for a 12 size pattern, 35" fabric, with or without a nap.

BEHAVIORAL OBJECTIVE NO. 2:

You will be able to identify the following five standard fabric positions for layouts:

a. lengthwise fold
b. crosswise fold
c. open
d. double fold
e. combination fold

LEARNING ACTIVITIES:

Required:

1. Read "Standard Fabric Positions For Layouts" below and study the examples in Figure 2 on page 74.

2. Using the fabric which is available in the learning center, practice folding each of the standard folds.

STANDARD FABRIC POSITIONS FOR LAYOUTS

There are several ways to fold fabric so that it will accommodate your pattern in an economical way. The following are some of the most common fabric positions for layouts.

LENGTHWISE FOLD: The selvages are placed together with the fold running parallel to the selvages. Most fabric is folded in this manner when it is purchased.

CROSSWISE FOLD: The fold runs in the same direction as the crosswise yarns; it is at a right angle to the selvages. This fold is usually used when a pattern piece is too wide for a lengthwise fold.

OPEN: Fabric is spread flat so that there is only a single thickness of fabric.

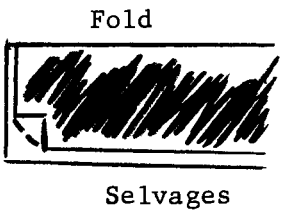
DOUBLE FOLD: The fabric is folded so that the selvages meet together in the center of the fabric. The fabric is folded in this manner when there are a large number of pieces which must be cut on

the fold.

COMBINATION FOLD: A combination of two or more of the common folds used to lay out one pattern.

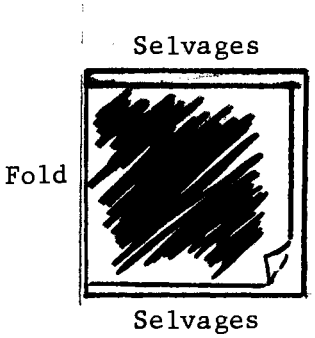
At times it will be necessary to fold the fabric over part way to cut a certain pattern piece. Any time a new fold is made the fold must be on the straight grain of the fabric. First measure the widest part of the pattern piece in order to determine how much fabric will need to be turned back. Then use a yardstick to measure from the selvage to the fold line every six inches and insert a pin. Fold the material along the pins, then use these pins to pin in the fold by placing them at a right angle to the fold.

LENGTHWISE FOLD:

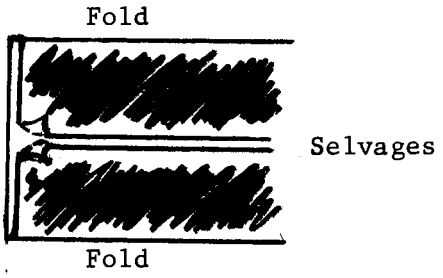


Indicates wrong side of fabric:

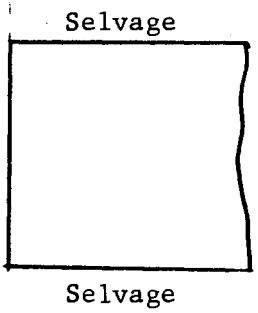
CROSSWISE FOLD:



DOUBLE FOLD:



OPEN:



COMBINATION FOLD:

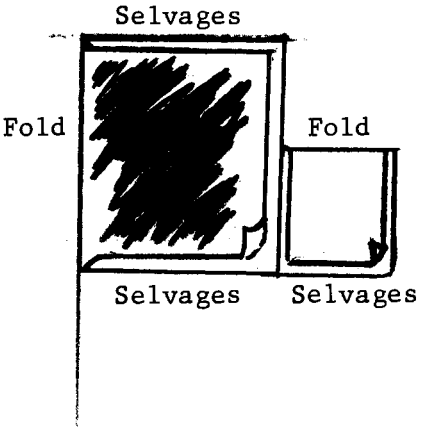


Figure 2. Standard Fabric Positions for Layouts

BEHAVIORAL OBJECTIVE NO. 3:

Given a drawing of a layout you will be able to determine whether pattern pieces are placed correctly; if they are not placed correctly state how corrections are to be made.

LEARNING ACTIVITIES:

Required:

1. Read "Following Pattern Layouts" below and answer all questions which accompany the reading.

2. With the pattern, fabric, and ruler which has been placed in Box II, practice laying out the pattern. Be sure that each piece is placed on grain (that straight-of-material lines have been properly measured in relation to the selvage).

FOLLOWING PATTERN LAYOUTS

Before laying out your pattern, place your fabric on a large table or cutting board. To be assured that you have enough fabric, always make a trial placement of your pattern whether you are using the guide sheet or not.

When following the layout on the pattern guide sheet, fold your fabric in the specified manner shown on the guide sheet. Right sides should be folded inside so that marking can easily be done on the wrong side of the fabric. When cutting a single thickness the right side of the fabric should be facing up. When placing the pattern pieces on the fabric, place all large pieces on first; then fit smaller ones in. Lay the pattern pieces as close together as possible. If a combination layout is used, lay all pieces on the lengthwise fold first, then cut and refold for the other layout. Remember to make a trial placement of your pattern before anything is cut.

When placing pattern pieces on the fabric, make sure that pieces which are to be placed on the fold are on the fold line, that pieces to

be cut on the bias are on the bias, and that straight-of-material lines are parallel to the selvages.

Long arrows or "straight-of-material" lines are printed on most pattern pieces (Fig. 3). These lines should be parallel to the selvage of the fabric. With a ruler, measure from one end of the straight-of-material line to the selvage; then measure from the other end of the line to the selvage making sure that both ends are the same distance from it (Fig. 3). If pattern pieces are cut off-grain the finished garment will sag and will not hang properly.

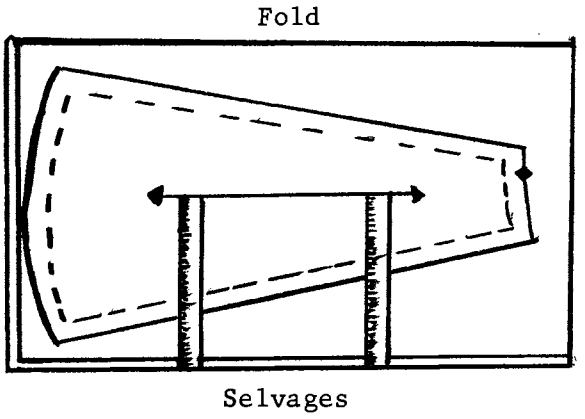
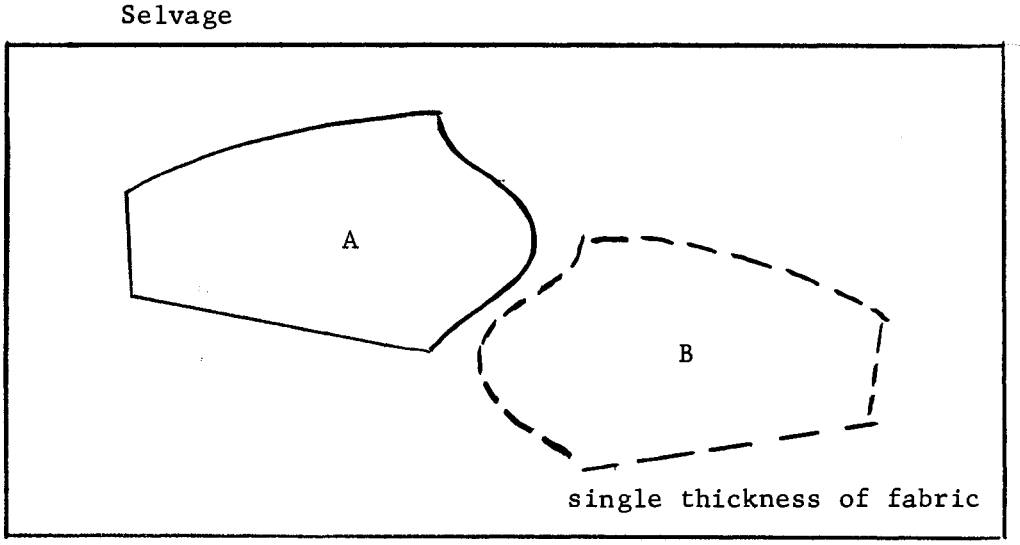


Figure 3

Pattern pieces which must be cut from a single thickness of fabric are designated by a dotted line on the pattern cutting guide sheet (Fig. 4). Such pattern pieces should be placed as indicated by the guide, outlined sparingly with pins, then turned upside down on the area where the layout indicates this piece by a dotted line. The pattern piece must be turned over for the second piece or there will be two sections for the same side of the body.

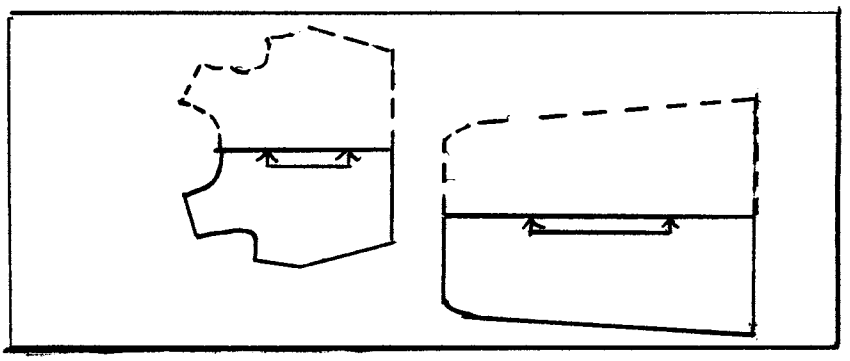


A = Indicates placement of original pattern.

B = Indicates where the original pattern piece is to be turned over and placed for the second cutting.

Figure 4

Some pattern pieces which are to be cut on the fold are indicated on the guide sheet by a solid black line outlining half of the piece and a dotted line outlining the other half (Fig. 5). Cut out surrounding pattern pieces first, then fold the fabric on grain to cut out this piece. It is important to measure to see that the fold is on the correct grain of the fabric.



Indicates that the piece is to be placed on the fold.

Figure 5

If it is necessary to add extra hem or seam allowances, pin through the edge of the pattern at the corners. The pins will block cutting and act as a reminder to cut an extra allowance (Fig. 6). Chalk marks, as well as pins, are an excellent reminder.

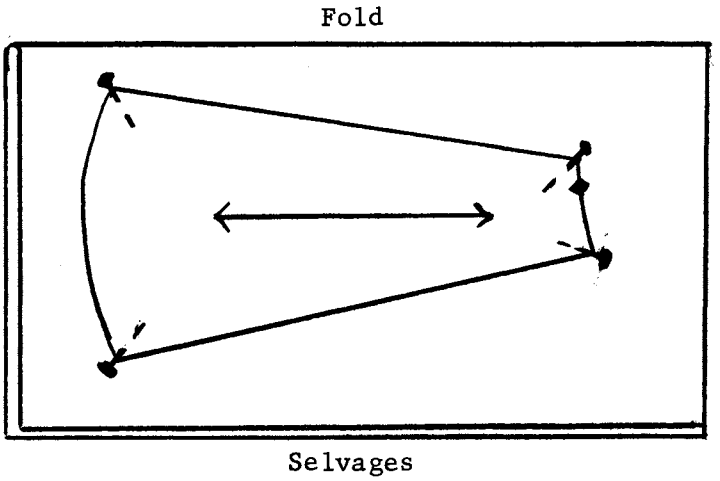
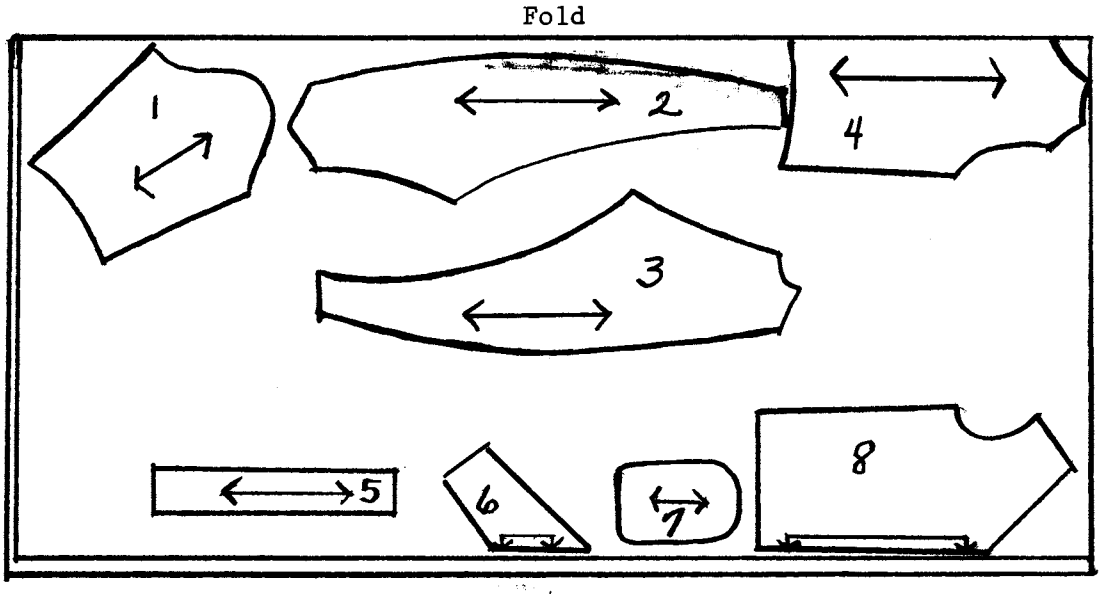


Figure 6

Before you cut, double-check to see that you have all the correct pieces and that you have allowed for cutting each piece the proper number of times. Pattern pieces for collars and pockets are sometimes used more than once.

ACTIVITY

In the following diagram which pattern pieces are placed incorrectly? What corrections should be made?



ANSWER:

Pattern pieces 1, 4, 6, and 8 are incorrectly placed. The straight-of-material line has not been properly measured for piece number 1, consequently the sleeve will be off-grain. Piece number 4 has been placed on the fold and it should not have been. Pieces 6 and **8** have been placed on the selvage edge and should have been placed on the fold of the fabric.

If you answered any part of the question incorrectly, reread "Following Pattern Layouts".

BEHAVIORAL OBJECTIVE NO. 4:

You will be able to identify several "pointers" for pinning a pattern on fabric.

LEARNING ACTIVITIES:

Required:

1. Read "Pinning on the Pattern" below and answer all questions which accompany the reading.

Optional:

1. Read "Pinning on the Pattern" on page 95 of Creative Clothing Construction by Allyne Bane. This book is in the learning center.

PINNING ON THE PATTERN

When pinning the pattern on a double layer of fabric, be sure to pin through both layers. Place two pins along the straight-of-material arrow immediately after measuring the pattern piece. This will prevent the pattern from slipping while it is being pinned on the fabric. Place the rest of the pins at a right angle to the edge of the pattern and no farther than ½" from the cutting line (Fig. 7). Pins which are incorrectly placed and pinned parallel to the pattern edge will cause the pattern edge and fabric to pucker and rise off the table beside each pin.

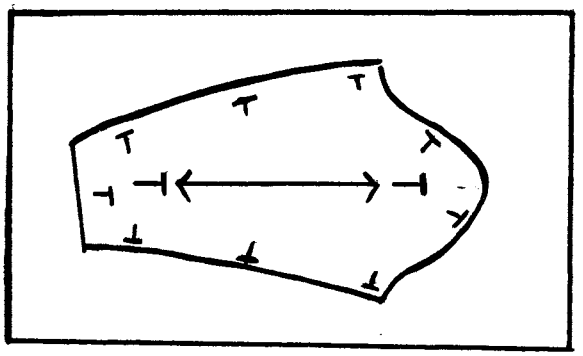
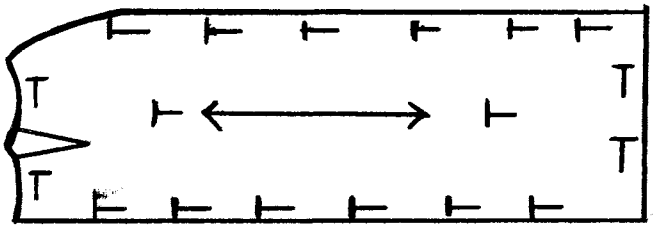


Figure 7

ACTIVITY

In the following drawing are all pins placed correctly? If the answer is "no", determine what is incorrect.



ANSWER:

No! The pins should be placed at right angles to the pattern cutting edge. You should place only enough pins in to keep the pattern tissue from shifting as you cut. The two pins which have been placed at the end of the straight-of-material line are placed correctly.

BEHAVIORAL OBJECTIVE NO. 5:

You will be able to identify eight general techniques which should be followed when cutting out a garment.

LEARNING ACTIVITIES:

Required:

1. Read "Cutting Techniques" below.
2. After cutting your next garment rate yourself with the check sheet entitled "My Rating in Cutting Techniques" on page 85.

CUTTING TECHNIQUES

Many times notes containing information for cutting appear on the pattern cutting guide sheet. Read these notes and follow them carefully. They may prevent you from making a costly mistake.

The following are eight general rules to follow when cutting out your garment.

1. Keep the ends and sides of the fabric parallel with the table's edges so that the grain line never shifts.

2. Walk around the table as you cut. Moving the fabric may shift the grain and result in cutting off-grain.

3. Do not pick up the fabric from the table or slip the left hand between the fabric and the table. Picking up the fabric changes the position of the pattern edge in relation to the fabric, which results in uneven cutting and cutting off-grain.

4. Cut evenly on the cutting line of the pattern or the altered pattern line with dressmaker shears. Inaccurate cutting can make a difference in the size or fit of the garment. Cut with long, smooth strokes using the full length of the shears.

5. Cut notches outward. Notches which are cut outward are more noticeable when constructing the garment. Cutting notches inward weakens and narrows the seam allowance. A complete seam allowance is needed in fitting.

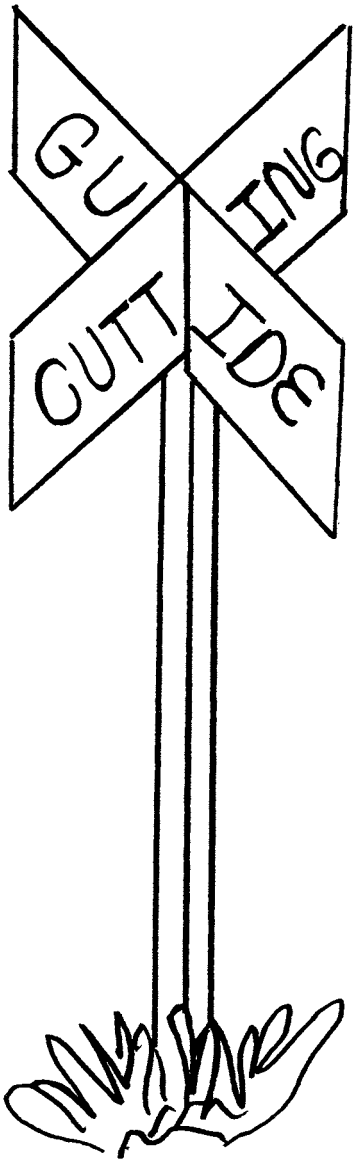
6. Do not use pinking shears to cut out the garment. Cutting with pinking shears will result in an inaccurate and uneven edge.

7. Cut all pieces before marking any. This saves time.

8. It is often helpful to wait until you are ready to work on each piece before removing the pattern. This will prevent your forgetting the name of the piece and will also allow you to see which seams to join. After pieces have been cut and marked it is best to drape them over a hanger to prevent wrinkling. However, fabrics which stretch easily should be folded with as few folds as possible when storing.

MY RATING ON CUTTING TECHNIQUES

Directions: Upon completion of the cutting you should be able to answer "Yes" to each of these questions. Each "Yes" gives you one (1) point. Total your points and see how you rated on cutting techniques. Try to improve the next time you cut.



	YES	NO
1. Did you keep the ends and sides of the fabric parallel with the table's edge so that the grain line never shifted?	____	____
2. Did you walk around the table as you cut?	____	____
3. Did you cut the fabric with it flat on the table?	____	____
4. Did you cut with long, smooth strokes?	____	____
5. Did you cut evenly with the edge of the pattern?	____	____
6. Did you cut notches outwardly?	____	____
7. Did you use <u>shears</u> for cutting?	____	____
8. Did you cut all pieces before marking any?	____	____
9. Did you wait until you were ready to work before removing the pattern?	____	____
TOTAL POINTS	____	

9 points = Excellent

7-8 points = Good

4-6 points = Fair

1-3 points = Poor

SELF-EVALUATION

MULTIPLE CHOICE

Directions: For each of the following questions, select from the listed responses the correct answer. Write the letter of your choice in the blank to the left of each question.

_____1. When cutting out your pattern pieces you should . . .

A. Cut slightly outside the pattern cutting edge
B. Cut notches inward
C. Save time by moving the material to a position so that you can cut easily
D. Use pinking scissors when cutting material which will ravel easily
E. All of the above are correct
F. None of the above are correct.

_____2. When laying out pattern pieces . . .

A. Make sure that pattern pieces which are to be placed on the fold are on the fold
B. Make sure that all pieces are placed on-grain
C. Place all large pieces on the fabric first, then place smaller pieces
D. Place pieces as close together as possible
E. All of the above are correct
F. None of the above are correct.

MATCHING

3-7. Use the following terms to answer 3 through 7. Place your answer in the left blank. Each term may be used only once.

A. Crosswise Fold	D. Double Fold
B. Lengthwise Fold	E. Combination Fold
C. Open Fabric	F. None of the above

_____3. Requires a fold parallel to the selvages and selvages placed together.

_____4. Requires a fold perpendicular to the lengthwise grain.

_____5. A single thickness of fabric.

_____6. Requires a lengthwise and a crosswise fold.

_____7. Places the selvages in the center of the fabric and creates two folds.

TRUE OR FALSE

Directions: Designate whether the following statements are True or False by writing the correct word to the left of the number. If the answer is "False," briefly tell why.

_____ 8. The only factors which determine the pattern layout to be used are the view, fabric width, and nature of the fabric.

_____ 9. Straight-of-material lines are to be placed parallel to selvages of the fabric.

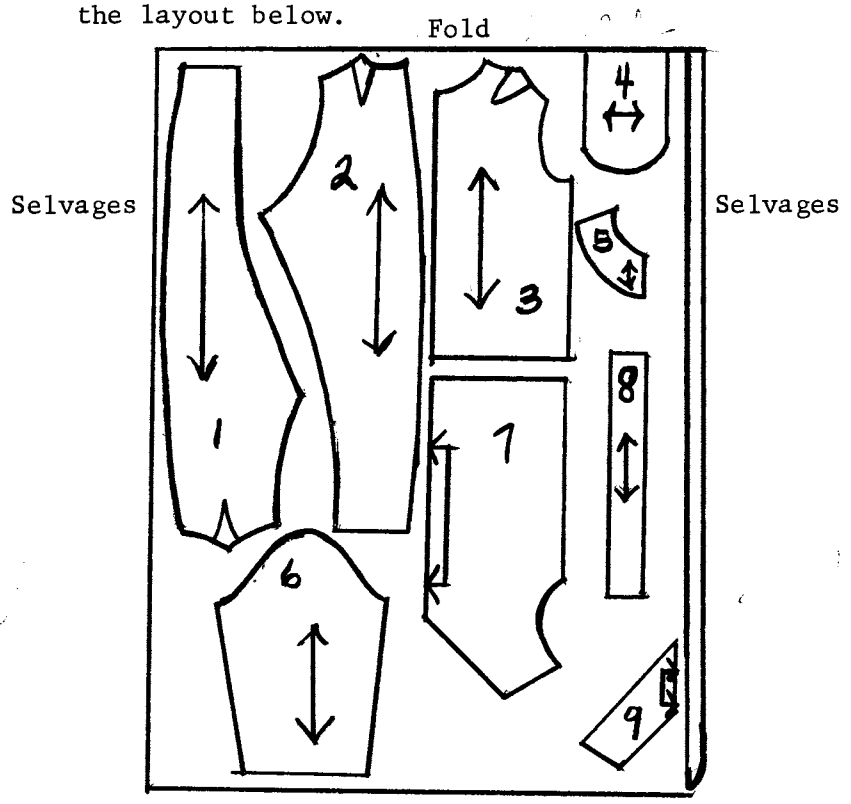
_____10. Both ends of the straight-of-material lines need not be measured if the line appears to be straight with the selvage.

_____11. When placing the pattern pieces on the fabric, place all large pieces on first; then fit smaller ones in last.

_____12. A trial placement of your pattern pieces is unnecessary and a waste of time.

_____13. If a combination layout is used, lay all pieces on the lengthwise fold first, then cut and refold for the other layout.

_____14. All of the pattern pieces have been correctly placed in the layout below.



TURN TO THE NEXT PAGE FOR THE SELF-EVALUATION ANALYSIS.

SELF-EVALUATION ANALYSIS

Check your test and if you answer all questions correctly, then you are ready for the post test. The post test will be given later. If you miss any questions, go back to the appropriate section of the package and reread. Follow through by doing the appropriate "Optional" learning activities which are listed. If you have any questions feel free to consult with your teacher.

ANSWERS:

1. F
2. E
3. B
4. A
5. C
6. E
7. D
8. False. Pattern size is also a factor.
9. True.
10. False. Straight-of-material lines should always be measured. The garment will sag and not fit properly if it is the least bit off-grain.
11. True.
12. False. A trial placement should always be made so that you will know you have enough material. You may save time and money if you do this.
13. True.
14. False. Pattern pieces "7" and "9" should have been placed on the fold of the fabric. Pattern piece "4" should not have been placed on the fold.

GETTING STARTED: CUTTING YOUR GARMENT

CUTTING SPECIAL FABRICS

Package No. III

TO BE USED IN CONJUNCTION WITH THE BOX OF MATERIALS IN THE LEARNING CENTER. ASK FOR BOX NO. III, "CUTTING SPECIAL FABRICS."

RATIONALE

Fabrics which require special handling such as napped or pile fabrics, plaids, stripes, and prints should receive special attention when you are laying out your pattern and constructing the garment. Your goal is a pleasing, harmonious effect. This can only be achieved by placing your pattern in such a way that no one part of the dress will be so obvious that it distracts the eye from the over-all design of the garment. A garment made from fabric which has been carefully handled looks better and has the look of quality.

Behavioral objectives are listed on the next page; read them carefully. When you finish this package you should be able to do everything which is specified in the objectives.

BEHAVIORAL OBJECTIVES

Upon completion of this package you should be able to:

1. ...determine whether or not a fabric has a nap, pile, or directional design, state and follow the rules for cutting directional fabrics.

2. ...determine whether a plaid is even or uneven, recognize and follow the rules for cutting even and uneven plaid fabrics.

3. ...determine whether a stripe is balanced or unbalanced, recognize and follow the rules for cutting the two different types of striped fabrics.

4. ...determine the right side of a knit fabric, state and follow the rules for cutting knit fabrics.

5. ...state and follow the rules for cutting border designs and large-scale prints.

6. ...recognize the significance of slip-basting plaids, stripes, and large-scale prints.

INSTRUCTIONS

On the following pages the behavioral objectives are listed separately. Under each is a list of learning activities for that objective. Do all of the required activities; if you feel you need further guidance proceed through the activities listed under "Optional" activities. Complete all of the learning activities listed for behavioral objective no. 1 before proceeding to behavioral objective no. 2, etc. Required activities for each objective should be completed in the order in which they are listed.

If you have a question at any time, feel free to consult with your teacher. She will be glad to answer any questions which you may have over this material.

BEHAVIORAL OBJECTIVE NO. 1:

You will be able to determine whether or not a fabric has a nap, pile, or directional design, state and follow the rules for cutting directional fabrics.

LEARNING ACTIVITIES:

Required:

1. Read "Directional Fabrics" below and answer all questions which accompany the reading.

2. Examples of directional fabrics have been placed in the learning center. Run your hand over these fabrics and look at them closely. (Box III)

Optional:

1. Read "Pile Fabrics" on page 188 of The Vogue Sewing Book. (Box III)

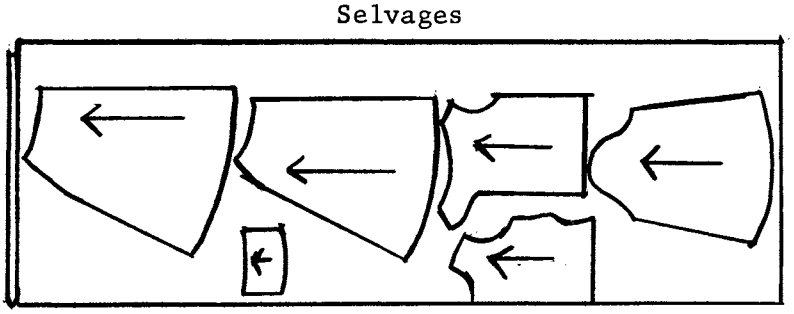
2. Read "For Napped or Pile Fabrics" on pages 98 and 99 in Creative Clothing Construction by Allyne Bane. (Learning Center)

DIRECTIONAL FABRICS

Fabrics which have a nap, pile, shading, or a one-way design are considered directional fabrics and the pattern must be placed on the fabric with all pieces going the same direction. Napped fabrics, such as wool broadcloth and suede cloth, are those which have been brushed after weaving leaving a fuzzy surface on one side. Pile fabrics, such as velvet, velveteen, and corduroy, were constructed so that yarns rise at an angle from the woven surface of the fabric. By running your hand over the surface of a piece of fabric you will be able to determine whether or not a fabric has a nap or pile. Notice that the fabric feels smooth when you stroke it "with the nap"; the fabric feels rough and stands up when you stroke against the nap. The fabric may appear

different in color or sheen according to the direction of the nap or pile. When fabric is cut "with the nap", or with the nap running down, the color is lighter and more shiny; when the nap is running up the color is deeper, richer, and darker.

Generally, when cutting a garment from velvet, velveteen, or corduroy, the pile should run up on the figure. Before pinning the pattern on velvets, place the fabric so that the pile side is up and cut one side of the garment at a time so that you are cutting through a single thickness. Be sure to place pattern pieces going all one direction (Fig. 1) and turn pattern tissues over to cut the opposite side of the garment.



NOTE THAT THE TOP OF ALL THE PATTERN PIECES ARE PLACED IN THE SAME DIRECTION ON PILE FABRICS.

Figure 1

Napped fabrics, such as wool broadcloth and suede cloth, should be cut with the nap running down for greatest wear and to avoid roughing up the nap from sitting. Crosswise folds for pattern layouts should not be used for napped, pile, or one-way design fabrics as the two sides of the garment would be cut with the nap running in the opposite direction.

Satins, brocades, and similar fabrics are also handled as directional fabrics. A shading effect is caused by the way the light is reflected off their surface. Pattern pieces should be placed on satins and brocades with all pieces going the same direction. When these fabrics are placed going one direction on the body the color is darker and richer; when they are placed going the opposite direction the color is lighter. The direction for placement of all pattern pieces will depend on the shading effect you wish to emphasize or on the raised, interwoven designs.

ACTIVITY

Answer the following question. The correct answer may be found below. If you answer the question incorrectly, reread "Directional Fabrics."

When cutting a garment from a pile fabric the pile should run _____ (up, down) on the garment; when cutting a garment from a napped fabric the nap should run _____ (up, down) on the garment.

ANSWER:

up, down

BEHAVIORAL OBJECTIVE NO. 2:

You will be able to determine whether a plaid is even or uneven, recognize and follow the rules for cutting even and uneven plaid fabrics.

LEARNING ACTIVITIES:

Required:

1. Read the section on "Plaids" below and answer all questions which accompany the reading.

2. Look at the examples of even and uneven plaids in Box III in the learning center.

Optional:

1. Read "For Plaid or Large Design" on pages 99 and 100 of Creative Clothing Construction by Allyne Bane. (Box III)

2. Read "Plaids" on pages 172-176 in The Vogue Sewing Book. Study the section entitled "Plaid Test" closely and look at the diagrams for pattern placement under each type of plaid.

PLAIDS

Since plaid fabrics provide additional design in a garment, the plaid should be placed so that it emphasizes the design lines of the garment and creates a pleasing, harmonious effect. It is best to avoid patterns with extremely complicated structural lines and patterns which specify "Not Suitable for Plaids" or "Not Suitable for Stripes."

When purchasing plaid fabric keep in mind that you will need to buy extra fabric for matching the plaid. The amount you will need will depend on the size of the plaid repeat. There are two types of plaids, even and uneven. In even plaids the stripe arrangement is the same in the lengthwise and crosswise directions which creates a perfectly square repeat. In an uneven plaid the design is different in the lengthwise and/or crosswise directions.

If you are in doubt as to whether the plaid is even or uneven the following test provides an easy way for you to tell.

(1) Fold the fabric diagonally through the center of a repeat.

(2) If the fabric is on grain and the colors and stripes are perfectly matched, further test the fabric by folding the plaid vertically or horizontally through the center of a repeat. If the plaid also matches perfectly when folded in this manner, it is an even plaid. If at any point the design does not form a mirror image, it is an uneven plaid.

Even Plaids:

The first step in matching even plaids is to prepare your fabric according to the cutting layout. You will probably need to refold your fabric; the fold line should be at the center of the plaid design. When matching the pattern pieces, be sure to match the seamlines, not the cutting lines. Center back and center front lines of the bodice and skirt pattern pieces should be placed in the center of the same plaid repeat.

The armhole notches of the bodice back and front and the corresponding sleeve notches should be placed on the same crosswise stripe if possible. At times you may be unable to match corresponding bodice and sleeve notches on both the front and back; in this case it is more important that they match on the front of the garment.

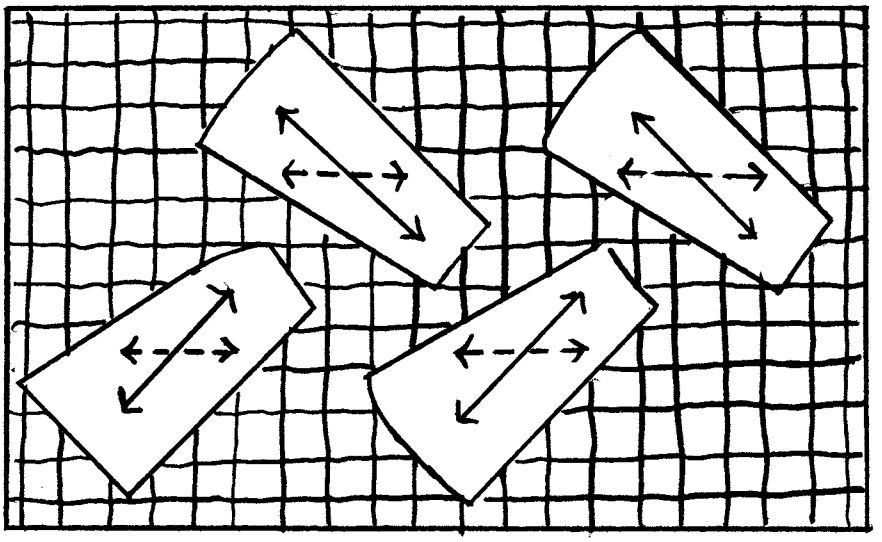
Uneven Plaids:

The basic principles for matching even plaids apply when matching uneven plaids; however, when matching uneven plaids the plaid cannot be

matched in both directions. You must choose the plaid stripe which you want to emphasize and the one you wish to use for the center front section. Fold the fabric on the desired line for the center front. Plaid lines of both layers of the fabric should match. Pin the fabric layers together at intervals to prevent slipping. If both layers of the fabric do not match, it will be necessary to cut the garment on a single thickness of fabric. In this case don't forget to turn the pattern piece over to cut the left side of the garment.

Plaids in Bias-Cut Garments:

When selecting material for your bias-cut garment, choose an even plaid. Unless the pattern has been designed specifically for fabrics which are to be cut on the bias the straight-of-material line will need to be changed on each pattern piece to indicate placement on the bias. This line will fall at a forty-five degree angle to the original straight-of-material line (Fig. 2). When cutting plaids on the bias it is better to cut left and right sides separately. Be sure to turn the pattern pieces face down when cutting the left side of the garment. Remember to match the plaid design for corresponding side seam notches.



⟷ Original straight-of-material line

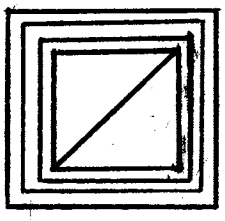
⟷ Newly established straight-of-material line

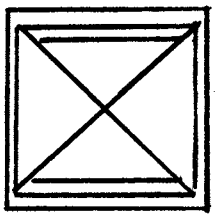
Figure 2

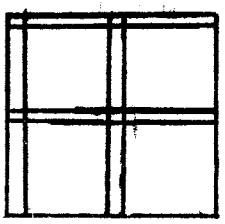
ACTIVITY

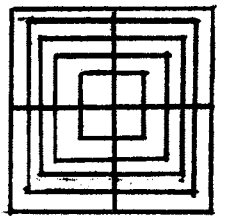
Answer the following questions. The correct answers may be found on the next page.

A. Which of the following is an even plaid?

a. 

c. 

b. 

d. 

e. None of the above are even plaids.

B. Which of the following statements regarding matching plaids are false?

a. Center back and center front lines of the bodice and skirt pattern pieces should be placed in the center of the same plaid repeat.

b. Uneven plaids can be matched with pattern pieces going opposite directions.

c. The basic principles for matching even plaids apply when matching uneven plaids.

d. When selecting fabric for a bias-cut garment, it is best to select an uneven plaid.

e. When matching plaids both layers of the folded fabric should match.

ANSWERS:

A. d

B. b,d

If you answered any of the questions incorrectly reread the section entitled "Plaids."

BEHAVIORAL OBJECTIVE NO. 3:

You will be able to determine whether a stripe is balanced or unbalanced, recognize and follow the rules for cutting the two different types of striped fabrics.

LEARNING ACTIVITIES:

Required:

1. Read the section on "Stripes" below.
2. Look at the examples for testing stripes on page 177 of The Vogue Sewing Book. (Box III)
3. Look at the diagrams for pattern placement under the sections on "Balanced Stripes" and "Unbalanced Stripes" in The Vogue Sewing Book--pages 178 and 179. (Box III)
4. Examine the samples in the learning center of balanced and unbalanced stripes. (Box III)

STRIPES

You will find stripes easier to match than plaids, as the design runs in only one direction. However, you may have difficulty in matching stripes if the stripes are unbalanced. You may distinguish between balanced and unbalanced stripes by folding the dominant stripe in half along its length. The stripe is balanced only if the stripes match when a corner of the fabric is folded back.

Balanced Stripes:

Matching a balanced horizontal stripe can be done by placing the dominant stripe so that it corresponds with the hemline, bustline, hipline or waistline. Be sure to pin pattern pieces so that they are on grain. Match stripes at center seams and side seams below the bust darts. Match stripes at armhole notches with stripes at corresponding sleeve notches (The Vogue Sewing Book, p. 179).

Matching balanced vertical stripes can be done readily by placing the straight-of-material arrow on your pattern parallel to the stripes. Place the center front and center back lines on the dominant stripe (The Vogue Sewing Book, p. 178).

Unbalanced Stripes:

An unbalanced horizontal stripe is treated in the same manner as a balanced horizontal stripe. However, all pattern pieces must be laid in the same direction.

When using an unbalanced vertical stripe, the straight-of-material arrow should be parallel to the stripe and pieces should be laid going the same direction. After choosing the desired stripe for the center front the same stripe should be used in the center back. With some designs it may be necessary to cut a single thickness of fabric at a time; if this is the case, be sure to reverse pattern pieces when cutting the opposite sections of the garment.

If a two-piece garment is being made from either type of striped fabric take care to lay the pieces in such a manner that the design will be continuous and the same from neckline to hemline (Figs. 3 and 4).

Figure 3

Which garment is more pleasing to your eye? No doubt the left one is as the stripes are continuous from the bodice through the skirt. The garment on the right is confusing to the eye since the stripes do not match.

Figure 4

Which garment is more attractive to you? The garment on the left probably appears more pleasing to you as the horizontal striped design is continuous from the neckline to hemline. In the garment to the right the two wide stripes which have been placed next to each other at the waistline interrupt the rhythm of the striped design.

BEHAVIORAL OBJECTIVE NO. 4:

You will be able to determine the right side of a knit fabric, state and follow the rules for cutting knit fabrics.

LEARNING ACTIVITIES:

Required:

1. Read "Knits" below and answer all questions which accompany the reading.

2. Several pieces of knit fabric have been placed in the learning center. Examine them and try to determine which is the right side of the fabric. (Box III)

Optional:

1. Read "Knits" on page 185 of The Vogue Sewing Book. (Box III)

2. Read "Double Knits" on page 5 of the pamphlet Modern Techniques for Modern Fabrics. (Learning center, Box III)

KNITS

It is advisable when cutting knit fabrics, especially jersey and tricot, to fold the right side of the fabric to the inside. This prevents the edges of the fabric from rolling. It is easy to determine the right side of knit fabrics; stretch the fabric in the crosswise direction and the cut edge will roll to the right side. When cutting do not let the fabric hang off the surface of the table; the fabric will stretch under the pattern.

ACTIVITY

The following questions are either true or false. Write your response to the left of each question. The correct answers may be found below.

_____A. Folding the right side of knit fabrics to the inside will prevent the edges of the fabric from rolling.

_____B. The right side of a knit fabric may be determined by stretching the fabric in the crosswise direction; the cut edge will roll to the right side.

ANSWERS:

A. true
B. true

If you answered the questions incorrectly reread the section on "Knits."

BEHAVIORAL OBJECTIVE NO. 5:

You will be able to state and follow the rules for cutting border designs and large-scale prints.

LEARNING ACTIVITIES:

Required:

1. Read "Border Designs" and "Large-Scale Prints" below and look at the diagrams for pattern placement of these two types of prints--The Vogue Sewing Book, page 180. Answer all questions which accompany the reading.

2. Look at the examples of the two types of prints which have been placed in the learning center. (Box III)

BORDER DESIGNS

When cutting fabrics with a border design it is best to have the border hem perpendicular to the center front and center back. Consequently, the straight-of-material arrow on your pattern will be parallel to the crosswise grain of the fabric. Your hemline should be predetermined and placed at the bottom of the border. Match the motif at the side seams whenever possible.

LARGE-SCALE PRINTS

Large-scale prints should be carefully positioned in the garment. Avoid placing large or bold designs on major body curves. They are more pleasing if centered vertically on the garment. Large-scale prints which have a definite vertical or horizontal direction should be handled carefully with all pattern pieces going in the same direction of the motif. The size of the motif will dictate whether it should be matched on side seams.

ACTIVITY

The following statements are either true or false. Write your response to the left of each question. The correct answers may be found below.

_____ A. When cutting fabrics with a border design the straight-of-material arrow on the pattern should be placed parallel to the lengthwise grain so that the border hem is perpendicular to the center front and center back.

_____ B. Large-scale prints should be carefully centered vertically on the garment and if the motif is directional all pattern pieces should be placed going the same direction.

ANSWERS:

A. FALSE. The straight-of-material arrow is placed parallel to the crosswise grain.

B. TRUE.

If you answered question "A" incorrectly reread the section on "Border Designs"; if you answered question "B" incorrectly reread the section on "Large-Scale Prints."

BEHAVIORAL OBJECTIVE NO. 6:

You will be able to recognize the significance of slip basting plaids, stripes, and large-scale prints.

LEARNING ACTIVITIES:

Required:

1. Read "Slip Basting" below.
2. Practice slip basting a plaid, stripe, or print. Be sure your fabric is perfectly matched when you are finished. Fabric is available in the learning center. (Box III)

SLIP BASTING

A perfectly matched stripe, plaid, or design will be assured if the garment is slip basted before it is sewn on the machine. Working from the right side of the fabric, crease and turn under the seam allowance on one edge of a section of the garment. Then place the folded edge on top of the corresponding section of fabric while carefully matching the design at the seamline. Pin the fabric together and slip stitch along the seam (Fig. 5). You are now ready to machine stitch.

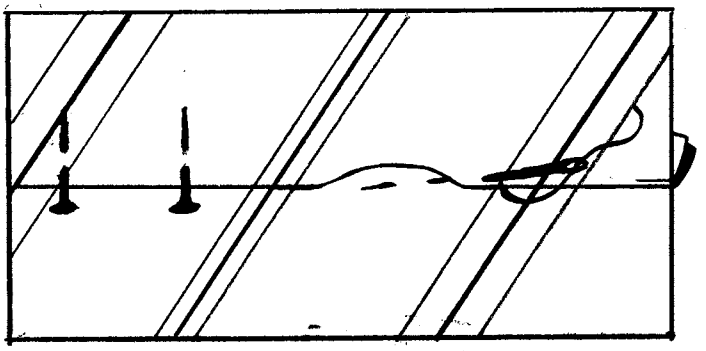


Figure 5

WHEN YOU FEEL YOU KNOW THE MATERIAL PRESENTED IN THIS PACKAGE TURN TO THE NEXT PAGE FOR YOUR SELF-EVALUATION.

SELF-EVALUATION

MULTIPLE CHOICE

Directions: For each of the following questions, select from the listed responses the correct answer(s). Write the letter(s) of your choice in the blank to the left of each question.

_____ 1. Which of the following is the proper way to determine whether a fabric has nap or pile?

A. Fabric will appear different in color and texture when it is viewed from different directions.
B. Fabric will have a different feel when stroked in different directions.
C. Fabric will have some degree of fuzziness.
D. Both A and C are correct.
E. None of the above are correct.
F. A, B, and C are correct.

_____ 2. Plaids should be matched . . .

A. On cutting lines
B. On notches
C. On stitching lines
D. ¼" from stitching line
E. All of the above are correct
F. None of these are correct.

_____ 3. You can determine whether a stripe is balanced or unbalanced by . . .

A. Folding the dominant line in half along its length and then folding back a corner of the fabric.
B. Folding back a corner of the fabric making sure that the fold is on the true bias.
C. Folding the dominant line in half along its length and then folding horizontally through the stripe repeats.
D. None of the above are correct.

_____ 4. Matching a balanced horizontal stripe can be done readily by placing the dominant stripe so that it corresponds with the . . .

A. Straight-of-material line on the pattern
B. Hemline marking on the pattern
C. Center front and center back of the neckline seam on the pattern
D. Both A and B are correct
E. None of the above are correct.

_____ 5. When cutting knit fabrics it is best to . . .

A. Fold the right side of the fabric to the inside.
B. Fold the wrong side of the fabric to the inside.
C. Not fold the fabric but cut pattern pieces from a single layer.

_____ 6. The following types of fabrics can be matched if pattern pieces are placed in opposite directions:

A. Even plaid
B. Uneven plaid
C. Balanced horizontal stripe
D. Unbalanced horizontal stripe
E. Balanced vertical stripe
F. Unbalanced vertical stripe
G. Border design.

_____ 7. When matching plaids and horizontal stripes you should match the pattern pieces at . . .

A. Corresponding armhole and sleeve notches
B. Corresponding notches on the skirt front and back
C. Center front and center back seams
D. Side seams above the bust dart
E. All of the above are correct

TRUE OR FALSE

Directions: The following are either True or False. Write your answer to the left of each question. If you answer "False", briefly tell why!

_____ 8. Napped fabrics are fabrics which are constructed so that the yarns rise at an angle from the woven surface.

_____ 9. Plaids which at first appear to be even, may in fact be uneven.

_____10. In even and uneven plaids the spaces and colors match in both directions.

_____11. When selecting a plaid fabric for a bias-cut garment, choose an even plaid.

_____12. In <u>even</u> plaids the design is different in lengthwise and/or crosswise directions.

_____13. One can match stripes on a balanced striped fabric even if pattern pieces are placed on the fabric in opposite directions.

_____14. Only beginners are advised to slip-baste plaids, stripes, and large-scale prints.

ESSAY

15. When cutting knit fabrics the fabric should not be allowed to hang off the surface of the table. Why?

TURN TO THE NEXT PAGE FOR THE SELF-EVALUATION ANALYSIS.

SELF-EVALUATION ANALYSIS

Check your test and if you answer all questions correctly, then you are ready for the post test. The post test will be given later. If you miss any questions, go back to the appropriate section of the package and reread. Follow through by doing the appropriate "Optional" learning activities which are listed. If you have any questions feel free to consult with your teacher.

ANSWERS:

1. F
2. B, C
3. A
4. B
5. A
6. A, C, E
7. A, B, C
8. False. Napped fabrics have been brushed after weaving leaving a fuzzy surface on one side. Pile fabrics are constructed so that the clipped yarns rise at an angle from the woven surface of the fabric.
9. True.
10. False. In uneven plaids the colors and spaces do not match in both directions.
11. True.
12. False. In uneven plaids the design is different in lengthwise and/or crosswise directions.
13. True.
14. False. Everyone should slip-baste for this insures perfect matching of plaids, stripes, or prints.
15. Knit fabrics stretch easily. If they are allowed to hang off the table the fabric will stretch under the pattern. This will result in inaccurate cutting of the fabric.

GETTING STARTED: CUTTING YOUR GARMENT

TRANSFERRING PATTERN MARKINGS

Package No. IV

TO BE USED IN CONJUNCTION WITH THE BOX OF MATERIALS IN THE LEARNING CENTER. ASK FOR BOX NO. IV, "TRANSFERRING PATTERN MARKINGS."

RATIONALE

Pattern markings make sewing much easier as they serve as reference points for all stages during construction of a garment. Since today's fabrics come in a wide variety of weights and types, you should be familiar with the various methods of transferring these markings to your fabric. Transferring pattern markings takes little time, however it is a step which will save much time while constructing your garment. In order for you to be assured that your garment will be constructed correctly, marking must be done accurately.

Behavioral objectives are listed on the next page; read them carefully. When you finish this package you should be able to do everything which is specified in the objectives.

BEHAVIORAL OBJECTIVES

Upon completion of this package you will be able to:

1. ...indicate which construction pattern markings should be transferred to your fabric.

2. ...indicate when pattern markings should be transferred and when marking is to be done on the right and wrong side of the fabric.

3. ....list seven different ways of marking your fabric, indicate when each method should be used, and describe the correct procedure of marking with each method.

INSTRUCTIONS

On the following pages the behavioral objectives are listed again separately. Under each is a list of learning activities for that objective. Do all of the required activities. Complete all of the learning activities for behavioral objective no. 1 before proceeding to behavioral objective no. 2, etc. Required activities for each objective should be completed in the order in which they are listed.

If you have a question at any time, feel free to consult with your teacher. She will be glad to answer any questions which you may have over the material.

BEHAVIORAL OBJECTIVE NO. 1:

You will be able to indicate which construction pattern markings should be transferred to your fabric.

LEARNING ACTIVITIES:

Required:

1. Read "What To Mark" below.

2. Look at several pattern pieces and identify the markings on them which should be transferred to your fabric. A pattern has been placed in the learning center. (Box IV)

WHAT TO MARK

All fold lines, center front and center back lines, grain lines, dots, dart lines, tucks, pleats, and construction symbol details such as buttonholes, buttons, and pockets should be marked on your fabric. Sometimes it is wise to transfer seamlines, especially if seams have been cut extra wide or if pattern seams are greater than 5/8 of an inch. Then you will know exactly where seams are to be joined. However, an experienced seamstress may feel that this is not necessary if all seams are the standard seam allowance and the pattern is not complex.

BEHAVIORAL OBJECTIVE NO. 2:

You will be able to indicate when pattern markings should be transferred and when marking is to be done on the right and wrong side of the fabric.

LEARNING ACTIVITIES:

Required:

1. Read "When To Mark" below and answer all questions which accompany the reading.

WHEN TO MARK

All pattern markings which are to be transferred to your pieces of cut fabric should be marked immediately after cutting before pattern tissues are removed. It is best to mark them while they are still flat on the table as the fabric will shift under the pattern if it is folded first.

ACTIVITY

Choose the best answer for the following question. The correct answer may be found following the reading.

You have just cut out a dress but don't feel you have enough time to start sewing it together for several weeks. Would you . . .

A. Mark all garment pieces and fold the fabric neatly for storing?
B. Fold the unmarked pieces and store?
C. Mark all garment pieces and drape them over a hanger, being sure to replace any pattern tissues which have been removed with the appropriate piece of fabric?

ANSWER:

C is the best answer. Pattern pieces should be marked especially if you are going to fold or move them. The fabric would have a tendency to shift under the pattern, therefore markings which were transferred after the pattern had been folded would not be accurate. It is best to keep all pattern tissues with the

appropriate piece until you are ready to construct the garment since sewing instructions are printed on them. When storing cut fabric it will not wrinkle as much if it is hung on a hanger. However, this would not be the ideal thing to do with a fabric which stretched easily.

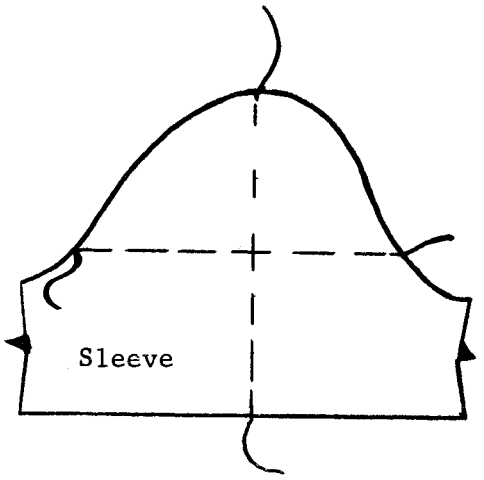
If you were unable to answer the question correctly reread the first paragraph of "When To Mark" in this package and #8 under "Cutting Techniques" in package number II.

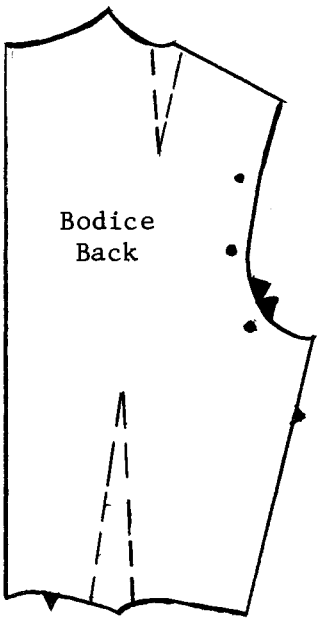
Almost all marking is done on the wrong side of the garment, however the purpose of each pattern marking determines whether it is to be placed on the right or wrong side of the fabric. Grainline markings are placed on the right side of the fabric for ease in checking fit of a garment. Design details and closure markings are marked on the right side. Markings which will serve as construction guides are placed on the wrong side of the fabric. ALL MARKINGS PLACED ON THE RIGHT SIDE OF THE FABRIC SHOULD BE MADE WITH THREAD OR PINS SO THAT THEY CAN BE REMOVED <u>COMPLETELY</u>.

ACTIVITY

Answer the following question. The correct answer may be found below. If you answer the question incorrectly reread the paragraph on page 118 of "When To Mark."

The purpose of each pattern marking determines whether it is to be transferred to the right or wrong side of the fabric. In the diagrams below, the markings which are shown on the bodice back piece have been marked on the wrong side of the fabric. The markings which appear on the sleeve have been marked on the right side of the fabric. Have all the markings which have been placed on each piece been transferred to the correct side of the fabric?





ANSWER:

Yes. Dart lines and dots have been marked on the bodice back. These markings are to be transferred to the wrong side of the fabric. Thread tracings have been made on the sleeve to indicate the grainline position. These should be placed on the right side of the fabric as an aid during fitting.

BEHAVIORAL OBJECTIVE NO. 3:

You will be able to list seven different ways of marking your fabric, indicate when each should be used, and describe the correct procedure of marking with each.

LEARNING ACTIVITIES:

Required:

1. Read the section entitled "Marking Methods" below. Answer all questions and do all activities which are presented throughout the reading.

MARKING METHODS

There are seven different methods which are used to transfer pattern markings to fabric. The one you will choose will depend on the fabric, equipment available for your use, and your own personal preference. Each method will be discussed in the following paragraphs.

Tracing Wheel and Carbon:

Marking with a tracing wheel and carbon is the quickest and easiest method which can be used to transfer pattern markings. It is excellent for marking underlinings. This method works well on most fabrics except sheer (markings show through on the right side) and heavy or napped fabrics (fabric construction does not allow markings to show). It is best to test by tracing on a scrap of the fabric trying different colors of carbon and different pressures. If this method scars your fabric, leaves a mark which is impossible or difficult to remove, or leaves a mark which is difficult to see, use a different method of marking.

When using this method, choose a color of carbon which is similar to or lighter than that of your fabric. On white or very light-colored

fabrics it is best to use another method of marking. To mark, remove pins from a portion of the pattern and place the carbon against the wrong side of the fabric. NEVER USE THIS METHOD TO MARK ON THE RIGHT SIDE OF THE FABRIC. Using a ruler to guide the tracing wheel, run the wheel along the dart lines or symbol of pattern to be marked. The end of darts can be indicated with a short line across the tip.

ACTIVITY

With the tracing wheel, carbon, pattern and fabric in the learning center, practice transferring several pattern markings. (Box IV)

Tailor's Tacks:

Tailor's tacks can be used on any fabric other than those which pin mark. They are especially good to use on tweeds, napped, or pile fabrics. This method of marking leaves tufts of thread which can be seen on both sides of the fabric and tacks are made with a different color of thread for each size or shape of marking. Therefore, this method provides advantages when it is necessary to work from both sides of the fabric or when many different intricate pattern lines are to be marked. However, there is one drawback--tailor's tacks are time consuming to make. This may be an important factor when you are pressed for time.

To make tailor's tacks use a long double thread without a knot. At the pattern symbol, take a small running stitch through the pattern and both layers of fabric. Take another stitch over the first and pull the thread until a large loop is formed. Go on to the next symbol without cutting the thread and again stitch as explained previously.

After all markings have been tacked, clip the loops and long threads connecting each tack. Raise the pattern tissue carefully and lift the upper layer of fabric back cutting the threads between the two layers of fabric. Be careful not to let the threads slip out of position. The procedure is the same regardless of whether you are marking a single or double layer of fabric.

ACTIVITIES

1. Read "How To Mark With Tailor's Tacks on page 70 of Smart Sewing by Catherine M. Doerr.
2. With a scrap piece of fabric and thread practice making tailor's tacks. (Box IV)

Thread Tracing:

Thread tracing is the method used to mark grainlines on garment pieces and to transfer necessary marks to the right side of the fabric.

Thread tracing is done with an uneven basting stitch after all construction marks have been transferred to the wrong side of the fabric and pattern tissues removed. If your fabric is to be underlined pattern markings must be transferred to the right side of the underlining rather than to the fashion fabric. After the underlining and the fashion fabric have been pinned together, thread trace center front and back lines, fold lines, and grainlines. Silk thread should be used on napped, pile, or light colored fabrics to prevent leaving an imprint.

ACTIVITY

Choose the best answer for the following question. Reread "Thread Tracing" on the preceding page if you answer the question incorrectly and read page 184 in The Vogue Sewing Book.

When thread tracing garments which are to be underlined you should . . .

A. Transfer all pattern markings to the right side of the fabric, pin underlining to the fabric where necessary, and then thread trace through center front and back lines, fold lines, and grainlines.

B. Transfer all pattern markings to the underlining, pin underlining to the fabric where necessary, and then thread trace through center front and back lines, fold lines, and grainlines.

C. Neither A nor B is correct.

ANSWER:

B is correct.

Chalk or Chalk Pencil:

This is a quick method which can be used on most fabrics. The chalk is used only on the wrong side of the fabric; it is best to test it first on a scrap piece of your fabric to determine whether it can be removed by the method in which you are going to care for your garment.

To use this method, place pins through the pattern tissues and both layers of fabric at construction markings. All pins should be going the same direction with the point of the pin toward the center of the cut piece. Remove the pattern starting at the edge of the

fabric working toward the center. Force the pin head through the pattern tissue; chalk the fabric at each pin on the wrong side of both layers of the fabric and remove pins. If the chalk tends to rub off, run a tracing of thread at the point of each chalk marking.

ACTIVITIES

1. Look at the example which has been placed in Box IV featuring this method of marking.
2. With the pins, chalk, pattern, and fabric available in the learning center practice transferring several pattern markings by this method. (Box IV)

Pin Marking:

The method of marking with pins should be done on fabrics which are easily marred by carbon paper or chalk. It is also a speedy process for marking. It should be used for marking details which will be completed early in the construction process such as darts, pleats, pockets, etc. If your pattern is highly detailed it may be better to use tailor's tacks. To pin mark insert a pin through each construction mark and both layers of the fabric. Pins should be pointing toward the center of the cut piece. Carefully lift off the pattern tissue forcing each pin head through. To mark the other layer of fabric, turn both layers of fabric over and place another pin through the fabric exactly where the first pin came through. At this point both layers of the fabric will still be pinned together, therefore you must re-pin the first layer of fabric you marked being careful to replace pins in the exact same place.

ACTIVITIES

1. Look at the example which has been placed in Box IV featuring this method of marking.

2. With the pins, fabric, and pattern which are available in the learning center (Box IV), practice marking by this method.

Clipping:

Clipping is a method which is used to mark pleats, tucks, sleeve cap centers, the center of collar neckline seams, the center of front and back skirt sections at the waistline, and the center of the front and back bodice at both the neck and waistline. A small clip is made in the seam allowance which makes this a risky method of marking. It is easy to clip too deep and ruin the garment. It also causes problems when a portion of the seam allowance is needed in making alterations. This method of marking is not appropriate for fabrics which ravel easily.

Butter Knife or Table Knife:

A butter knife or the dull side of a table knife may be used to make an indented line on the right side of some fabrics. If markings are made accurately, this can be an excellent way of marking for top-stitching. Use a ruler to guide the knife while making the indention. Again, it is best to test this method on a scrap piece of fabric.

ACTIVITY

Answer the following question. If you are unable to answer the question correctly reread "Marking Methods."

Mary is making garments out of the following types of fabric: voile, mohair and wool blend, gingham. Beside each of these fabrics listed below is written the method she used for marking each. Did she use a method which is appropriate for each fabric?

Voile - Tailor's Tacks

Mohair and Wool Blend - Pin Marking

Gingham - Tracing Wheel & Carbon

ANSWER:

Yes. Each method was appropriate for the type of fabric.

WHEN YOU FEEL YOU KNOW THE MATERIAL PRESENTED IN THIS PACKAGE TURN TO THE NEXT PAGE FOR YOUR SELF-EVALUATION!

SELF-EVALUATION

MATCHING

1. Seven methods for marking your fabric are listed. Indicate whether each is appropriate for the types of fabric which are listed to the right by writing "Yes" or "No" on the appropriate line.

	Sheer Voile	Velvet	Tweeds
Tracing Wheel & Carbon	_____	_____	_____
Tailor's Tacks	_____	_____	_____
Pins and Chalk	_____	_____	_____
Pin Marking	_____	_____	_____
Thread Tracing	_____	_____	_____
Clipping	_____	_____	_____
Butter Knife or Table Knife	_____	_____	_____

MULTIPLE CHOICE

Directions: For each of the following questions, select from the listed responses the best answer. Write the letter of your choice in the blank to the left of each question.

_____ 2. Which pattern markings do not <u>always</u> need to be transferred to the fabric?

A. Seamlines
B. Center front and center back lines
C. Fold lines of facings
D. Dots
E. Construction symbol details

_____ 3. Tailor's tacks are . . .

A. Time consuming to make
B. The quickest and easiest method of marking
C. Sometimes made with a different color of thread for each size or shape of marking
D. Both A and C
E. None of the above are correct

_____ 4. Thread tracing . . .

A. Is done with a slip basting stitch
B. Is done with a permanent machine stitch
C. Is done with a catch stitch
D. Is done with a running stitch
E. None of the above are correct.

_____ 5. When thread tracing garments which are to be underlined you should:

A. Transfer all pattern markings to the right side of the fabric, pin underlining to the fabric where necessary, and then thread trace through center front and back lines, fold lines and grain lines.

B. Transfer all pattern markings to the underlining, pin underlinings to the fabric where necessary, and then thread trace through center front and back lines, fold lines, and grain lines.

C. Neither A nor B is correct.

D. Both A and B are correct.

_____ 6. When marking with pins and chalk:

A. The pins should be removed after you have chalked the fabric.
B. Place pins through the pattern, both layers of the fabric, and point all of them toward the center of the cut piece.
C. If the chalk tends to rub off, run a tracing of thread at the point of each chalk mark.
D. A and C only.
E. A, B and C are correct.

_____ 7. Pin marking should:

A. Be used for marking details which will be completed early in the construction process.
B. Be done on fabrics which are easily marred by carbon paper or chalk.
C. Not be used on fabrics which pin mark.
D. A, B, and C are all correct.

_____ 8. Transferring the construction markings from the pattern to the fabric should be done . . .

A. While the fabric is still flat on the table and before pattern tissues are removed.
B. Immediately after cutting.
C. With the method most suitable to the nature of the fabric.
D. Accurately and without marring the fabric in any way.
E. All of the above are correct.

TRUE OR FALSE

Directions: The following statements are either True or False. Write your answer to the left of each question. If you answer "False", briefly tell why!

_____ 9. Tailor's tacks are appropriate for marking all fabrics.

_____10. The only markings which are to be transferred to the right side of the fabric are center front and center back lines.

_____11. Almost all marking is done on the wrong side of the material.

_____12. Thread tracing is done with an uneven basting stitch.

_____13. It is important to choose a method of marking which is appropriate for the fabric you are working with.

_____14. When marking with tailor's tacks the procedure used on a single layer of fabric varies from the procedure used on a double layer of fabric.

_____15. It is wise to transfer seamlines if seams have been cut extra wide or if pattern seams are greater than 5/8 of an inch.

_____16. Clipping to mark fabrics is inappropriate for fabrics which ravel easily.

_____17. Making an indention in the fabric with a butter knife or the dull side of a table knife is an excellent way of marking for top stitching.

_____18. All pattern markings which are to be transferred to your pieces of cut fabric should be marked immediately after cutting.

TURN TO THE NEXT PAGE FOR THE SELF-EVALUATION ANALYSIS.

SELF-EVALUATION ANALYSIS

Check your test and if you answer all questions correctly, then you are ready for the post test. The post test will be given later. If you miss any questions, go back to the appropriate section of the package and reread. If you have any questions feel free to consult with your teacher.

ANSWERS:

1.

	Sheer Voile	Velvet	Tweed
Tracing Wheel & Carbon	NO	NO	NO
Tailor's Tacks	YES	YES	YES
Pins and Chalk	NO	YES	NO
Pin Marking	YES	NO	YES
Thread Tracing	YES	YES	YES
Clipping	NO	NO	NO
Butter Knife or Table Knife	NO	NO	NO

2. A
3. D
4. E
5. B
6. E
7. D
8. E
9. False. They are not appropriate for fabrics which pin mark.
10. False. Grainline markings, design details, and closure markings are marked on the right side of the material.
11. True.
12. True.
13. True.
14. False. The procedure is the same for marking a single and double layer of fabric.
15. True.
16. True.
17. True.
18. True.

APPENDIX B

PRETEST AND POST-TEST

PRETEST

MULTIPLE CHOICE

Directions: For each of the following questions, select from the listed responses the correct answer. Write the letter of your choice in the blank to the left of each question.

_____ 1. If a dress is cut from fabric which is off-grain one of the three factors of fabric which is affected is . . .

A. Hang
B. Design lines of garment
C. Weft
D. Texture
E. None of the above

_____ 2. Yarns of a fabric which run the entire length of the fabric are not . . .

A. Strong and stable
B. Called filling yarns
C. Referred to as the lengthwise grain
D. Parallel to the fabric selvage

_____ 3. The best method to use when locating the grain in linen is:

A. Pulling a yarn
B. Tearing
C. Both are acceptable methods to use on linen
D. Neither A nor B are acceptable methods to use on linen

_____ 4. Which method is best to use when locating grain in a tightly woven wool fabric in which the yarns have been highly twisted?

A. Cutting beside a visible thread
B. Tearing
C. Pulling a thread
D. None of the above methods is appropriate

_____ 5. The following fabric <u>cannot</u> be straightened:

A. Wool flannel
B. Silk shantung
C. Permanent press cotton broadcloth
D. A woven polyester fabric
E. Suede cloth

_____ 6. Bonded fabrics which are bonded off-grain can be straightened by . . .

A. Pulling the short ends of the fabric on the true bias every six inches
B. Steaming the fabric and smoothing it with the hands until the right angle structure is restored
C. The wet-cloth method
D. Bonded fabrics cannot be straightened if they are off-grain

_____ 7. Which of the following is not a method for straightening fabric grain?

A. Pulling short ends of fabric on the true bias
B. Wet-cloth method
C. Pulling long ends of the fabric on the true bias
D. Professional drycleaning

_____ 8. Which fabric can be preshrunk?

A. Cotton
B. Linen
C. Knit fabrics
D. Wool fabrics
E. All of the above fabrics can be preshrunk

_____ 9. Which of the following methods for preshrinking is used most often on cotton fabrics?

A. "London shrink"
B. Soaking or washing
C. Professional drycleaning
D. Holding a steam iron two to three inches above the fabric

_____10. Which of the following factors does not affect the pattern layout to be used?

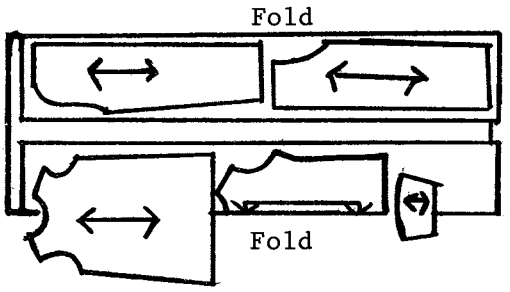
A. Fabric width
B. View of the design
C. Person's height
D. Pattern size

_____11. The correct procedure for measuring straight-of-material lines for pinning pattern pieces on fabric is:

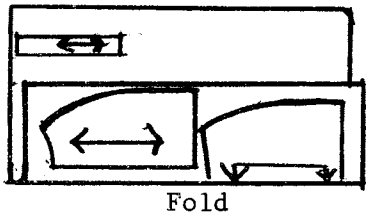
A. Place pattern on fabric, measuring from both ends of the pattern to the selvage. Make sure that both ends measure the same.
B. Place pattern on fabric, measuring from both ends of the straight-of-material line to the selvage. Make sure both ends measure the same.
C. Either A or B could be followed.
D. Neither procedure is correct.

_____12. The following pattern layout is correctly placed on the fabric:

A.



B.



C. Both A and B are correct.
D. Neither A nor B is correct.

_____13. Pins should be placed:

A. At right angles to the fabric edge
B. Approximately ¼" inside the cutting line
C. Through both thicknesses of fabric
D. On straight-of-material lines first
E. All of the above

_____14. An important procedure to remember when cutting out a garment is to:

A. Avoid lifting the fabric and pattern off the table when cutting so that a more accurate cutting edge can be achieved
B. Cut with dressmaker's shears using short strokes
C. Cut pattern notches inward so there will be no need for marking later
D. Cut with pinking shears so that seams will not need to be finished
E. All of the above are correct

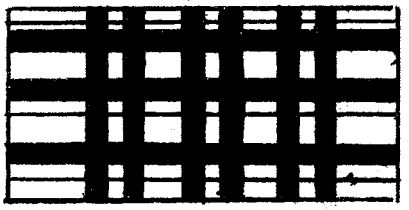
_____15. Of the fabrics listed, the one which <u>does not</u> require that all pattern pieces be placed in the same direction of the fabric is:

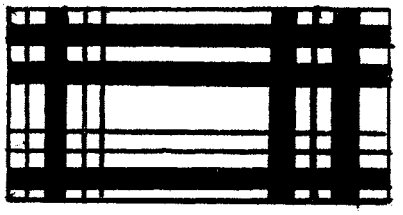
A. Corduroy
B. Velvet
C. Brocade
D. Silk shantung
E. Suede cloth

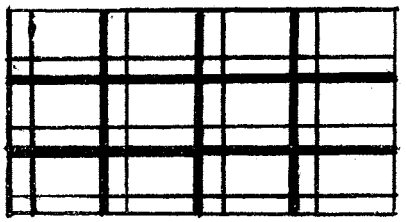
_____16. When cutting out a bodice front on a single thickness of a napped fabric, the second time the pattern piece is cut it must be:

A. Turned over so that the right side of the pattern piece is against the fabric and placed on the fabric so that the nap is running in the same direction as the piece which was cut first
B. Turned over so that the right side of the pattern piece is against the fabric and placed on the fabric so that the nap is running in the opposite direction from the piece which was cut first
C. Cut with the right side of the pattern piece facing up as it was the first time and placed on the fabric so that the nap is running in the opposite direction from the piece which was cut first
D. Cut exactly as it was the first time

_____17. The following is an even plaid:

A. 

B. 

C. 

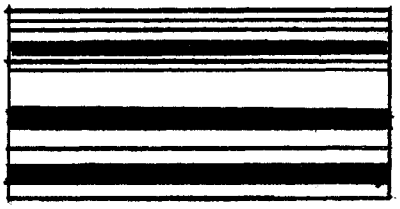
D. Both A and C are even plaids.

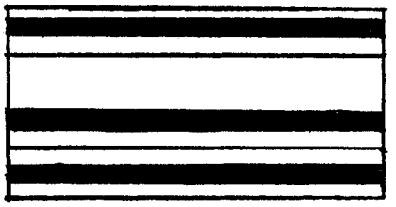
E. None of the above are even plaids.

_____18. One can identify an <u>uneven</u> plaid by:

A. Folding the fabric diagonally through the center of a repeat
B. Folding the plaid vertically or horizontally through the center of the repeat
C. A and B together
D. None of these

_____19. Which of the following is an unbalanced stripe?

A. 

B. 

C. Both A and B are unbalanced stripes
D. Neither A nor B is unbalanced

_____20. Unbalanced horizontal stripes should be matched at:

A. Center seams
B. Side seams above bust darts
C. Corresponding armhole and sleeve notches
D. Both A and C are correct
E. All of the above are correct

_____21. When matching plaids pattern pieces should be matched . . .

A. On the cutting line
B. On the seamline
C. ¼-in. from the seam line
D. None of the above are correct

_____22. The following pattern markings should be transferred to the fabric:

A. Center front and center back lines
B. Fold lines
C. Alteration lines
D. All of the above should be transferred
E. A and B only

_____23. Pattern markings should be transferred to pieces of cut fabric . . .

A. Before you cut
B. Just before you are ready to sew
C. Immediately after cutting before pattern tissues are removed
D. As you are constructing each pattern piece

_____24. The right side of a knit fabric is determined by stretching the fabric . . .

A. In the crosswise direction; the cut edge will roll to the wrong side
B. At a 45^{o} angle to the courses and wales; the cut edge will roll to the wrong side
C. In the lengthwise direction; the cut edge will roll to the right side
D. All of the above are correct
E. None of the above are correct

_____25. When cutting fabrics with a border design which is to be placed at the hemline the . . .

A. Straight-of-material arrow on the pattern should be placed parallel to the lengthwise grain
B. Pattern should be placed so that the border design is parallel to the center front and center back
C. Border design should be carefully centered vertically on the garment
D. Hemline of the garment should be predetermined and placed at the bottom of the border
E. A, B and C are all correct

_____26. Joy is making a skirt from a loosely woven tweed fabric. Which method of marking would be best for her to use in transferring pattern markings to her fabric?

A. Pins only
B. Pins and chalk
C. Tailor's tacks
D. Tracing wheel and a dark piece of carbon
E. None of the above are correct

_____27. Tracing wheel and carbon markings are always placed on:

A. The wrong side of the fabric
B. The right side of the fabric
C. Fabric which will be in the seam allowance
D. Pieces of fabric which are to be faced
E. B and D

_____28. When marking with a tracing wheel and carbon paper you should:

A. Test tracing on a scrap of fabric first
B. Choose a color of carbon which is darker and a complete contrast to the color of your fabric
C. Use a ruler to guide the tracing wheel
D. Indicate the ends of darts with a short line across the tip
E. Do all except B

_____29. Thread tracing is the method used to mark . . .

A. Grainlines
B. Center front and back lines
C. Facing fold lines
D. A, B and C are all correct
E. None of the above are correct

_____30. When thread tracing garments which are to be underlined, pattern marking must be transferred to the . . .

A. Right side of the fashion fabric
B. Wrong side of the fashion fabric
C. Right side of the underlining
D. Wrong side of the underlining

_____31. The following method of marking leaves tufts of thread which can be seen on both sides of the fabric:

A. Tailor's tacks
B. Thread tracing
C. Tailor basting
D. Slip basting

_____32. When pin marking all pins should be inserted pointing . . .

A. Toward the center of the cut piece of fabric
B. Toward the edge of the cut fabric
C. In one direction

_____33. The following method of marking causes problems when a portion of the seam allowance is needed in making alterations:

A. Tracing wheel and carbon
B. Pins and chalk
C. Clipping
D. Butter knife or table knife
E. Tailor's tacks

_____34. When marking with pins and chalk . . .

A. Place the pins only through the pattern tissue and one layer of fabric
B. Pins can be placed in the fabric going any direction
C. Run a thread tracing at the point of each chalk marking if the chalk tends to rub off
D. All of the above are correct
E. None of the above are correct

MATCHING

Directions: Place your answer in the blank to the left of the number.

35-39. Match the terms in the left column with the appropriate sketch.

_____35. Combination fold

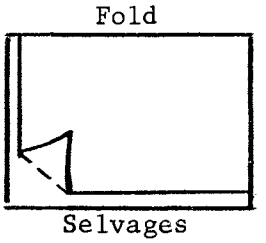
_____36. Lengthwise fold

_____37. Open

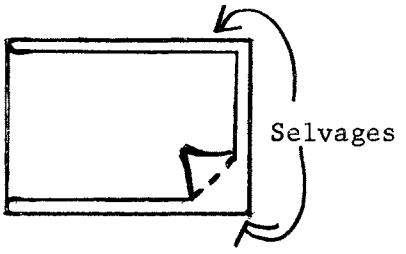
_____38. Double fold

_____39. Crosswise fold

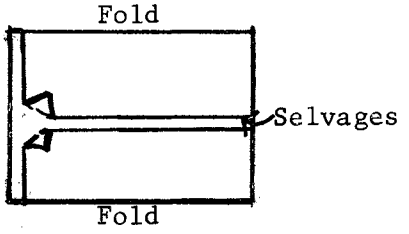
A.



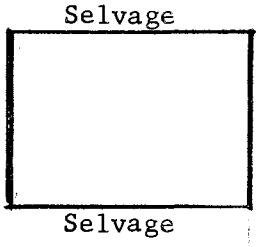
B.



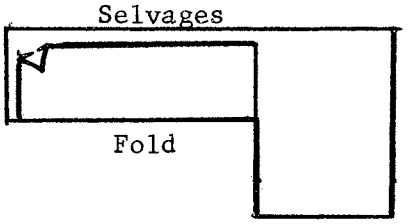
C.



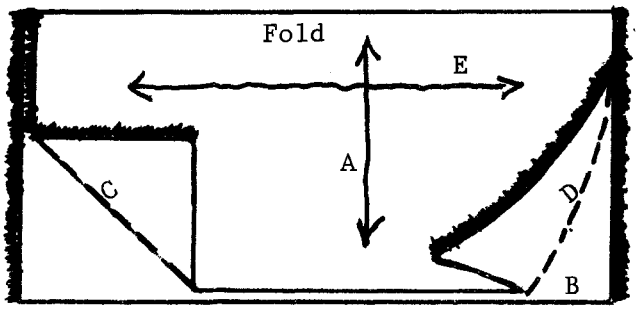
D.



E.



40-44. Match the letters on the diagram below with the statements following the diagram.



_____40. Indicates the selvage of the fabric.

_____41. Is referred to as the "filling" or the crosswise grain

_____42. Is referred to as the "warp" or the lengthwise grain

_____43. Represents a garment bias

_____44. Represents a true bias

45-50. Indicate whether the following pattern construction markings should be transferred to the right or wrong side of the fabric.

_____45. Fold lines

_____46. Center front

_____47. Pockets

_____48. Grain lines

_____49. Buttonholes

_____50. Dart lines

A. Transfer to right side of fabric

B. Transfer to wrong side of fabric

C. Need not be transferred

POST TEST

MULTIPLE CHOICE

Directions: For each of the following questions, select from the listed responses the best answer. Write the letter of your choice in the blank to the left of each question.

_____ 1. Which of the following may be affected if a garment is cut from fabric which is off-grain?

A. Hang
B. Fit
C. Line
D. All of above
E. A and C only

_____ 2. Yarns which extend from selvage to selvage of a fabric . . .

A. Represent the crosswise grain of the fabric
B. Are perpendicular to the lengthwise grain
C. Are less stable and have more given than the yarns which run the length of the fabric
D. Are usually placed horizontally on the body
E. Are all of the above

_____ 3. The method used most often for locating grain in cotton fabric is . . .

A. Pulling a thread
B. Tearing
C. Cutting beside a visible thread

_____ 4. Which of the following fibers should never be torn to locate grain position?

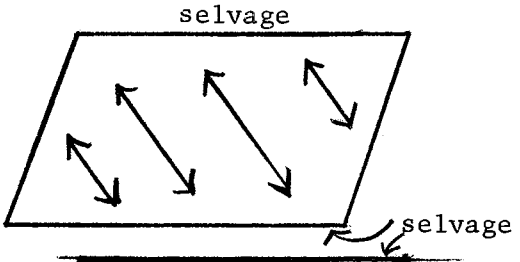
A. Silk
B Linen
C. Cotton
D. Wool
E. All of the above fabrics should be torn

_____ 5. A woolen fabric is slightly off-grain. You may straighten it by . . .

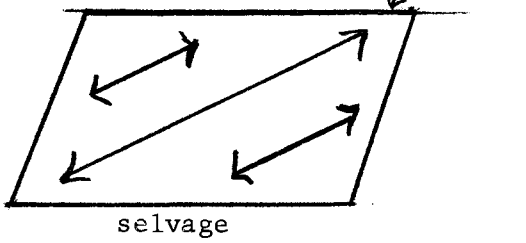
A. Pulling vigorously on the bias from short end to short end
B. Evening the ends of the fabric and pinning them together before cutting
C. Steaming the fabric with an iron and then straightening the ends of the fabric
D. Evening the ends of the fabric, basting selvages and ends of the fabric together and then steaming the fabric with an iron while smoothing it with the hands
E. All of the above

_____ 6. The following diagram shows the proper direction to pull when straightening fabric:

A.



B.

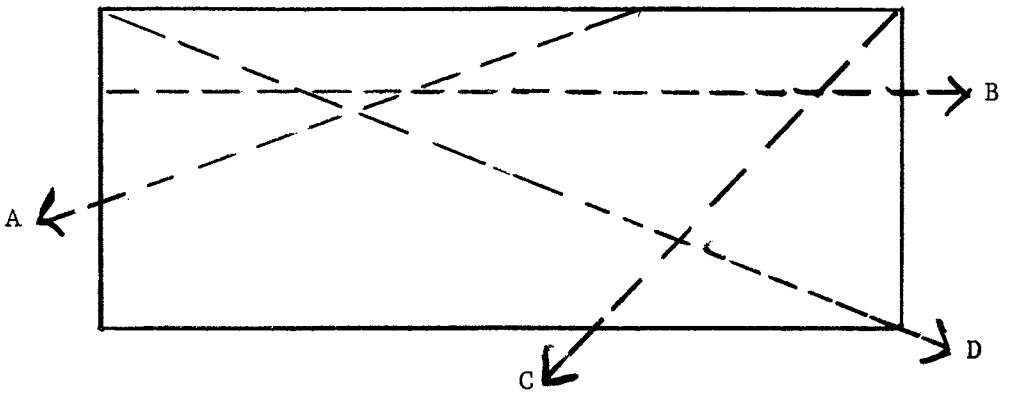


C. Neither
D. Either would straighten fabric

_____ 7. Fabric is considered on-grain when . . .

A. Crosswise ends of the fabric match evenly and are at right angles to the selvage and the fold
B. Selvages are even
C. No ripples appear in any part of the fabric
D. All of these
E. None of these

_____ 8. In the following diagram the rectangle represents a piece of fabric. Along which dotted line would you cut if you were asked to cut on a true bias?



_____ 9. One step in the wet-cloth method involves . . .

A. Placing the fabric in a sink which contains warm water and mild soap
B. Placing the fabric in the washing machine and washing it on a gentle cycle with mild soap
C. Rolling the fabric up in a damp sheet
D. Soaking the fabric in a pan of warm water for three minutes
E. None of the above

_____10. Which of the following methods for preshrinking fabrics is correct to use on fabrics made from silk?

A. "London Shrink"
B. Soaking or washing
C. Steaming
D Reputable drycleaning

_____11. Which of the following includes all factors that determine the pattern layout to be used:

A. 1. a person's height
2. the nature of the fabric
3. the width of the fabric

B. 1. the nature of the fabric
2. the pattern size
3. the fabric width

C. Both are correct

D. Neither A nor B is correct

_____12. To place the pattern pieces on the lengthwise grainline of the fabric . . .

A. Measure accurately from the selvages to the fold of the fabric
B. Measure from both ends of the straight-of-material line on each pattern piece to the selvage of the fabric
C. Measure from the straight-of-material line to the torn edge of the fabric
D. Measure the distance between the straight-of-material lines of each pattern piece
E. None of the above

_____13. Which of the following techniques should be followed when pinning a pattern piece on the fabric?

A. Place pins parallel to the pattern edge
B. Pin ¼ inch from the pattern edge
C. Do not place pins along the straight-of-material line--this is a waste of time
D. All of the above are correct
E. None of the above is correct

_____14. Which of the following techniques should be followed when cutting out a garment?

A. Walk around the table as you cut
B. Cut notches outward
C. Cut evenly with the edge of the pattern
D Cut all pieces before marking any
E. All of the above are correct

_____15. Which of the following factors should be considered in determining the pattern layout to be used?

A. The nature of the fabric
B. Pattern size
C. View of the design
D. Fabric width
E. All of the above

_____16. Two correct pinning techniques are:

A. 1. pin through both thicknesses where a double layer of fabric is used
   2. pin 1" from the edge of the pattern

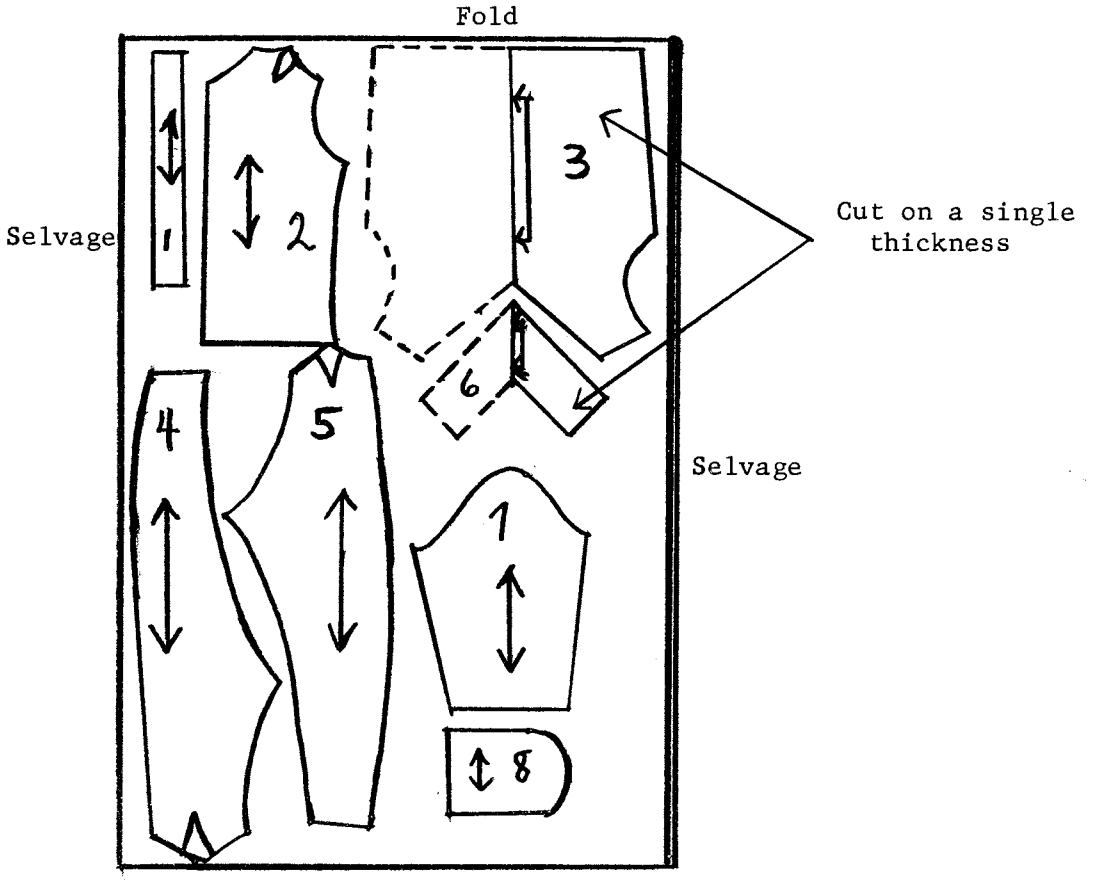
B. 1. pin 1" from the edge of the pattern
   2. place pins at right angles to the fabric edge

C. 1. pin on straight-of-material lines first
   2. pin at right angles to the fabric edge

D. None of the above are correct

_____17. In the following diagram all pattern pieces have been placed correctly <u>except</u>:

A. "3" and "7"
B. "8"
C. "3", "7", and "8"
D. None are placed correctly
E. All are placed correctly



_____18. Which of the following techniques should be followed when cutting out a garment?

1. Cut smoothly, with even strokes
2. Cut all pieces out before marking
3. Use pinking shears <u>only</u>
4. Don't pick up the fabric or put hand under the cloth
5. Cut notches outwardly
6. Keep grain from shifting
7. Walk around the table as you cut
8. Cut accurately on the cutting edge of pattern

A. Follow all of the above techniques.
B. Follow all except 1 and 8.
C. Follow all except 2.
D. Follow all except 3.

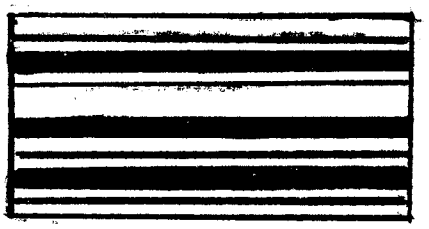
_____19. Napped fabrics are:

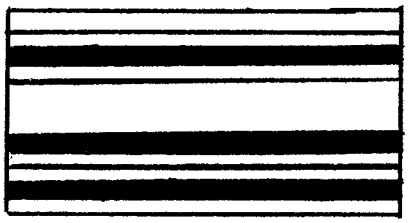
A. Smooth when stroked "with the nap"
B. Rough when stroked against the nap
C Both A and B
D. None of the above

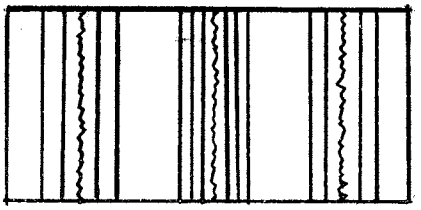
_____20. Unless a pattern has been designed specifically to be cut on the bias of the fabric, the straight-of-material marking will need to be changed on each pattern piece; this new line will fall at a:

A. 90° angle to the original grainline
B. 60° angle to the original grainline
C. 45° angle to the original grainline
D. 30° angle to the original grainline
E. None of the above are correct

_____21. Which of the following is a balanced stripe?

A. 

B. 

C. 

D. Both B and C are balanced stripes
E. None of the above are balanced stripes

_____22. Which of the following types of striped fabrics can be matched if pattern pieces are placed in opposite directions?

A. Balanced vertical striped fabric
B. Unbalanced vertical striped fabric
C. Unbalanced horizontal striped fabric
D. Both B and C can be matched
E. None of the above can be matched

_____23. Plaids should be matched . . .

A. On cutting lines
B. At nothces
C. On straight-of-material arrows
D. None of the above are correct

_____24. More fabric must be purchased than is normally needed when one selects fabric with . . .

A. A large uneven plaid design
B. An embossed design
C. A tweed texture
D. A balanced stripe
E. All of the above

_____25. When a knit fabric is stretched in the crosswise direction:

A. The cut edge will roll to the right side of the fabric
B. The cut edge will roll to the wrong side of the fabric
C. The cut edge will not roll but remain perfectly flat
D. None of the above are correct

_____26. Large scale prints should be . . .

A. Carefully centered vertically on the body
B. Cut with all pattern pieces going the same direction if the motif is directional
C. Centered on the garment in such a way that large or bold designs are not placed on major body curves
D. Only B and C are correct
E. All of the above are correct

_____27. When slip basting . . .

A. All work is done from the wrong side of the fabric
B. A catch stitch is used
C. Turn under the seam allowance on one edge of a section of a garment
D. Only B and C are correct
E. A, B, and C are correct

_____28. Which of the following pattern markings should <u>not</u> be transferred to the fabric?

A. Alteration lines
B. Dart lines
C. Fold lines for facings
D. Directional stitching arrow
E. A and D

_____29. Pattern markings <u>should be</u> transferred:

A. Immediately after cutting, before pattern tissues are removed
B. While the material is still flat on the table
C. Before you cut
D. Both A and B are correct
E. A, B and C are all correct

_____30. June is making a white crepe dress. Which marking method would be best for her to use in transferring pattern markings to her fabric?

A. Tracing wheel and carbon
B. Tailor's tacks
C. Chalk or chalk pencil
D. Pencil

_____31. When marking with a tracing wheel and carbon choose a color of carbon which is . . .

A. The same color as your fabric
B. Much darker than your fabric
C. Similar to or lighter than that of your fabric
D. It makes no difference which color of carbon is used as long as markings can be seen

_____32. The tracing wheel and carbon method is not appropriate for marking . . .

A. Tweeds
B. Underlinings
C. Sheer fabrics
D. Any of the above fabrics
E. A and C

_____33. Which of the following pattern markings are to be transferred to the right side of your piece of cut fabric?

A. Dart lines
B. Buttonholes
C. Center front and center back line
D. Grainlines
E. B, C and D are correct

_____34. Pin marking . . .

A. Should be used for marking details which will be completed early in the construction process.
B. Should not be used if your pattern is highly detailed.
C. Is done by inserting pins through the pattern tissue and all layers of fabric, lifting off the pattern tissue, marking the other layer of fabric with a pin at the point where the first pin came through, and then carefully repinning the first layer of fabric.
D. A, B and C are correct
E. None of the above are correct

_____35. The following method of marking should not be used on fabrics which ravel easily:

A. Pin and chalk
B. Tailor's tacks
C. Clipping
D. Pin marking
E. Both A and D are correct

_____36. Which of the following pattern markings are to be transferred to the wrong side of your fabric?

A. Darts
B. Pocket markings
C. Tucks
D. Pleats
E. A, C, and D are all correct

_____37. Before thread tracing all construction markings must be transferred to . . .

A. The <u>right</u> side of the fabric
B. The <u>wrong</u> side of the fabric
C. <u>Both</u> the right and wrong sides of the fabric
D. Either the right or wrong side of the fabric--it makes no difference.

_____38. When thread tracing napped, pile, or light-colored fabrics the following type of thread should be used:

A. Mercerized cotton
B. Polyester
C. Silk
D. Buttonhole twist

_____39. Clipping . . .

A. Is a method of marking which is appropriate for all fabrics
B. Is a risky method of marking
C. May be used to mark pleats and tucks
D. B and C only
E. All the above are correct

_____40. Tailor's tacks . . .

A. Are made with a knotted double strand of thread
B. Can be seen on both sides of the fabric
C. Are especially good to use on tweeds, napped, or pile fabrics
D. Are appropriate for fabrics such as satin
E. Both B and C are correct

_____41. When marking with pins and chalk the chalk . . .

A. Is used only on the right side of the fabric
B. Is used only on the wrong side of the fabric
C. Can be used on either the right or wrong side of the fabric

MATCHING

Directions: Place your answer in the blank to the left of the numbers.

42-46. Match the terms in the left column with the appropriate sketch.

_____42. Combination fold

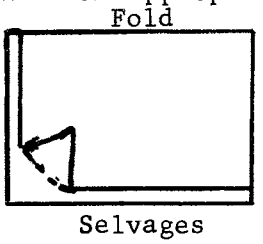
_____43. Lengthwise fold

_____44. Open

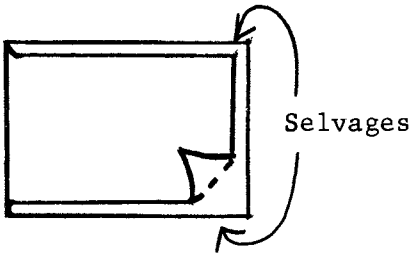
_____45. Double fold

_____46. Crosswise fold

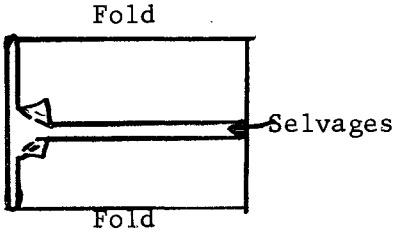
A.



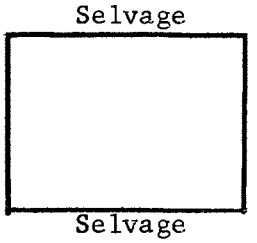
B.



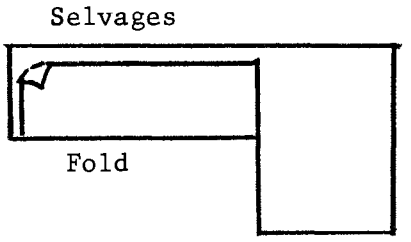
C.



D.



E.



47-50. Choose one item from the right column that best matches the statement in the left column.

_____47.	This fabric should be cut with the pile running up for richness of color.	A. Brocade
_____48.	This fabric should be cut with the pile running down for longer wear.	B. Suede cloth
_____49.	Makes no difference whether the pattern pieces are running up or down on the fabric just as long as all of them are laid going the same direction.	C. Velveteen
_____50.	Pattern pieces can be laid in opposite directions on this fabric.	D. None of the above fabrics
		E. A, B, and C

APPENDIX C

EVALUATION SHEET

Your answers to the following questions are needed to complete this study. There are no wrong or right answers and your responses will not affect your grade.

Name_____ Section No._____Major_____

1. Which method of instruction do you prefer? lecture____
   self-paced packages____

2. Why do you prefer the method you checked in Question 1?

3. Which of the following would you prefer?

   _____Material for the entire course placed in self-paced packages.

   _____Only a part of the course material placed in self-paced packages.

   _____None of the course material placed in self-paced packages.

4. Describe your over-all reaction to the packages:

   _____interesting

   _____easy to understand

   _____can repeat packages as many times as necessary

   _____can move at my own pace

   _____all information on the subject is organized in one package

   _____too time consuming

   _____too difficult

   _____repetitious

   _____boring

   _____activities were just busy work

   _____illustrations were not helpful

   _____illustrations were unclear

   _____activity questions throughout the reading were not helpful

   _____instructions were not clear

5. Describe your reaction to the format of the package:

Liked	Disliked	
_____	_____	listing of behavioral objectives
_____	_____	activity questions throughout the reading
_____	_____	illustrations
_____	_____	listing of required activities
_____	_____	listing of optional activities
_____	_____	self-evaluation

6. Check the following specific learning activities which you found to be worthwhile:

_____viewing sketches of hang, fit, and line

_____examining examples of grain, selvage, bias, etc. which were pointed out in relation to the piece of fabric

_____determining the appropriate method for locating grain in sample fabrics

_____locating courses and wales in the samples of knit fabric

_____practicing folding the standard fabric positions

_____practicing laying out the pattern

_____completing cutting technique rating sheet

_____viewing examples of directional fabrics

_____viewing examples of even and uneven plaids

_____viewing examples of balanced and unbalanced stripes

_____viewing example of testing stripes and placement of pattern pieces on stripes in The Vogue Sewing Book

_____determining the right side of knit fabrics

_____viewing examples of the two kinds of print fabrics which were discussed

_____slip-basting and matching a sample piece of plaid or stripe fabric

_____identifying pattern markings which are to be transferred to cut fabric

_____transferring pattern markings with the tracing wheel and carbon

_____making tailor's tacks

_____transferring markings by means of pins and chalk

_____transferring markings by means of pins

_____viewing example of marking with pins and chalk

_____viewing example of marking with pins

7. Did you find the learning packages easy to follow and understand?

yes_____ no_____ Why or why not?

8. List suggestions you have for improving the over-all unit Getting Started: Cutting Your Garment.

9. (Please Circle)

My general interest in this unit was . . . . . High Medium Low

My previous knowledge of the information presented in this unit was . . . . . High Medium Low

I feel my increase in knowledge of the material presented in this unit was . . . . High Medium Low

10. Approximately how much time did you spend on the unit Getting Started: Cutting Your Garment?

Hours_____ Minutes_____

VITA

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