SPECIAL PROGRAM IN TECHNICAL VOCATIONAL EDUCATION (SPTVE)
DRESSMAKING 8
Q3-Week-3

I.   Topic: Performing Simple Calculations
II. Objectives:
1. convert the metric system to the English system of measurements.
2. perform simple calculations based on the job requirements of the clients/customers, and
3. value the importance of converting the metric system to perform simple calculations.

III. Brief Introduction of the Lesson
   A simple calculation is an easy mathematical application used to determine the accurate measurement of body parts, length and width of materials, and cost needed to create apparel for the clients/customers.

1. Measuring Body Parts

There are two kinds of the measurement system as we have learned in the previous lesson. These are the Metric System, where centimeter is used as the standard measure of length by designers of the new generation, and the English System expressed in inches for a basic unit. These systems are used in measuring the different parts of the body.
   When we put 1 inch on our Measurement Chart (IMC) it should be accompanied by its equivalent length of 2.54 centimeters of the Metric System.

2. Length and Width of Materials

In measuring the length and width of materials needed such as fabrics, we can use either of the two systems of measure. How do we convert a Metric to an English measure?

As an example, let's take this:
How many inches are there in a 100 centimeters width of fabric?
How many centimeters are there in a 60 inches length of fabric?

To answer these questions, let's compute using the simple calculations below:

a. Given:
   1 inch = 2.54 cm
   Width of fabric = 100 cm
   Equivalent of an inch to cm = 2.54

Calculation:
   $\dfrac{100 \text{ cm}}{2.54 \text{ cm}}$ = **39.37 inches**

b. Given:
   1 inch = 2.54 cm
   Length of fabric = 60 inches

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Equivalent of a cm to an inch = 2.54 cm

Calculation: 60 inches
                    X 2.54   cm
                    152.4 cm

Cost Needed

Simple calculations are also used in determining the cost needed to buy a particular fabric or materials to be used by the dressmaker.

Let's take an example, you as a dressmaker need to buy a 60 inches length of fabric to be used in making apparel for your client. The cost of the fabric is Php10.00 per centimeter. How much will it cost?

Step I – Convert 60 inches into centimeters.

        60 inches
    X 2.54 cm
        152.4 cm

Step II – Multiply the cost per centimeter to the length of fabric converted.

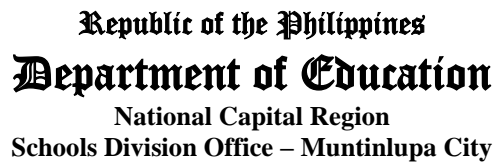   152.4 cm
    X   10.00 Php
        1524.00 Php

IV.   Activities:

Activity 1

Directions: Measure the following using the Metric System and give its equivalent in English System. Write your answer on a separate sheet of paper.

	Metric System	English System
1. Body Measurement • Waist		
• Shoulder		
2. Length and Width • Length of Fabric		

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• Width of Cutting Table		

Activity 2
Problem Solving

Directions: Solve the following problem with the solution.
1. Satin cloth needed is 50 inches which cost Php 3.50 per centimeter. How much would be the cost of the fabric?
2. The length of one side of a square cutting table is 1000 cm. give the width of the table in inches.

Scoring Matrix

Criteria	Points
Complete solutions with the correct answer	10 points
Correct answer but incomplete solution	5 points
The incomplete solution, wrong answer	2 points

Activity 3
Directions: Convert the following measurements (inches to centimeters)

Inches	Centimeters
1 1/4 inch	
1 1/2 inch	
1 3/4 inch	
2 inches	
3 inches	
4 inches	
5 inches	
6 inches	
7 inches	
8 inches	
9 inches	
10 inches	
25 inches	
50 inches	

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75 inches	
100 inches	

V. Assessment:

Directions: Write the letter of the correct answer on a separate sheet of paper.

1. A change of figures like changing from centimeters to inches and vice versa.
   A. measurement   B. accuracy   C. conversion   D. approximate

2. How many centimeters are there in 1 inch?
   A. 2.45 cm.   B. 4.25 cm.   C. 2.54 cm.   D. 5.24 cm.

3. A property of a thing that admits the exact measurement and numerical statement.
   A. quantity   B. quality   C. approximate   D. estimate

4. A famous couturier wants to make a cocktail dress for an actress. He needs 500 centimeters length of fabric which costs Php 12.50 per centimeters. How much is the cost of the fabric?
   A. Php. 6,250   B. Php. 7,250   C. Php. 6,502   D. Php. 5,250

5. Angelica's waist measurement is 24 and one-half inches. Give her waist measurement in centimeters?
   A. 64.32"   B. 46.32"   C. 62.23"   D. 61.23"

VI. Reflection:

Directions: Answer the following questions briefly on a separate sheet of paper in paragraph form.

- What are mathematical operations are used in performing simple calculations?
- How is the correctness of basic estimation applied?

References:

- Hilario. Carmelita B. (2008). Clothing and Technology Made Easy. Revised Edition. Quad Alpha Centrum Bldg. Mandaluyong City: National Book Store.
- Competency-Based Learning Material in Second Year Garments NC II
  Department of Education
  K to 12 Dressmaking and Tailoring Learning Module.pdf
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