OALCF Task Cover Sheet

Task Title: Calculate Flower Bed Materials and Cost

Learner Name:
Date Started: **Date Completed:**   **Successful Completion:**   Yes___   No___
Goal Path: Employment **√**   Apprenticeship___   Secondary School **√**   Post Secondary **√**   Independence **√**
Task Description: Understand how to calculate materials and costs for creating a flower bed.

Competency:	**Task Group(s):**
A: Find and Use Information C: Understand and Use Numbers	A2: Interpret documents C1: Manage money C3: Use measures

Level Indicators:
A2.1:   Interpret very simple documents to locate specific details
C1.2:   Make low-level inferences to calculate costs and expenses that may include rates such as taxes and discounts
C3.2:   Use measures to make one-step calculations
C3.3:   Use measures to make multi-step calculations; use specialized measuring tools
Performance Descriptors: see chart on last page
Materials Required: • Pen and paper   • Calculator

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Learner Information and Tasks

As a worker at a Garden Centre you must be able to help people to plan their gardens - from picking the appropriate plants, to calculating how much soil or mulch they will need, to figuring out how many plants are needed in a certain area, to calculating the final cost. You should be able to help the customers work within their budgets.

Task 1: A customer wants to make a flower bed in the following shape at the back of her house. The garden measures 4.8 m by 8.4 m.
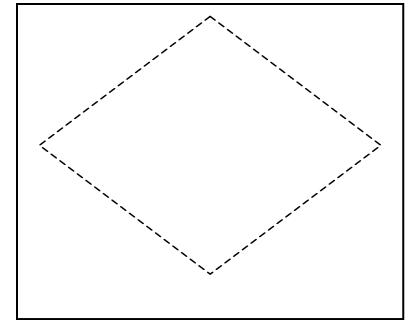
   a. Calculate the area of the flower bed.
   b. Calculate the number of full bags of mulch required to cover the bed. Each bag covers 3.5 to 4 m².
   c. Calculate the cost of the mulch you will be purchasing. Each bag of mulch costs $3.50.
   d. Calculate the amount of top soil needed to spread 10 cm deep on the whole bed.
   e. How many bags of topsoil will she need to buy if each bag contains 0.35 m³?
   f. Calculate the total cost of the topsoil. Each bag of topsoil costs $2.79. Be sure to include HST (13%).

Task 2: The customer purchases the following plants for the flower bed:
   - Impatiens 3 per meter along the inner edge of the flower bed.
      - Impatiens can be bought in flats of 9 for $1.99.
   - Hostas - 10 for $1.79 each
   - Geraniums - 12 for $1.39 each
   - Rose Bushes - 3 at $8.99 and one at $12.99
   - Shrubs - 2 at $15.99 and one at $24.99

   Calculate the total cost of the plants. Be sure to include HST (13%).

Task 3: Calculate the total cost of materials for the garden. Include a delivery charge of $25.00. No HST charge on deliveries, it is included in the price.

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Answer Sheet

1. A customer wants to make a flower bed in the following shape at the back of her house. The garden measures 4.8 m. by 8.4 m.
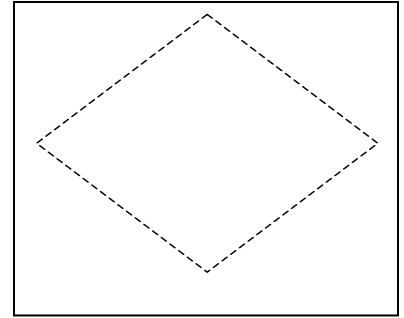
   a. Calculate the area of the flower bed.   **40.32 m²**
   b. Calculate the number of full bags of mulch required to cover the bed. Each bag covers 3.5 to 4 m². **12 bags but 11 bags would also be okay**
   c. Calculate the cost of the mulch you will be purchasing. Each bag of mulch costs $3.50. **11 bags = $38.50, 12 bags = $42.00 or (dependent on the answer to b)**
   d. Calculate the amount of top soil needed to spread 10 cm deep on the whole bed.
      4.8m x 8.4 m x .1 m = 4.032 m³
   e. How many bags of topsoil will she need to buy if each bag contains 0.35 m³?
      4.032÷.35=11.52 (12 bags)
   f. Calculate the total cost of the topsoil. Each bag of topsoil costs $2.79. Be sure to include HST (13%). **12x2.79=$33.48 HST: 33.48x.13=4.35 Total: 33.48+4.35= $37.83**

2. The customer purchases the following plants for the flower bed:
   - Impatiens 3 per meter along the outside edge of the flower bed.
     - Impatiens can be bought in flats of 9 for $1.99.
     - **Perimeter of flower bed: 8.4+8.4+4.8+4.8=26.4m 26.4÷3 = 8.8 (9 flats) 9x1.99=17.91**
   - Hostas - 10 for $1.79 each **17.90**
   - Geraniums - 12 for $1.39 each **16.68**
   - Rose Bushes - 3 at $8.99 and one at $12.99 **39.96**
   - Shrubs - 2 at $15.99 and one at $24.99 **56.97**

   Calculate the total cost of the plants. Be sure to include HST (13%). **142.31 + 18.50 = $160.81**

2. Calculate the total cost of materials for the garden. Include a delivery charge of $25.00 no HST on deliveries. **160.81 + 37.83 + 25.00 = $223.64**

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	Performance Descriptors	Needs Work	Completes task with support from practitioner	Completes task independently
A2.1	• scans to locate specific details			
	• interprets brief text and common symbols			
	• locates specific details in simple documents, such as labels and signs			
C1.2	• calculates using numbers expressed as whole numbers, fractions, decimals, percentages and integers			
	• calculates percentages			
	• interprets and applies rates (e.g. $/kg, $/1)			
	• chooses and performs required operation(s); may make inferences to identify required operation(s)			
	• selects appropriate steps to reach solutions			
	• represents costs and rates using monetary symbols, decimals and percentages			
	• interprets, represents and converts amounts using whole numbers, decimals, percentages, ratios and simple, common fractions (e.g. ½, ¼)			
	• uses strategies to check accuracy (e.g. estimating, using a calculator, repeating a calculation, using the reverse operation)			
C3.2	• calculates using numbers expressed as whole numbers, fractions, decimals, percentages and integers			
	• makes estimates			
	• understands and uses ratio and proportion			
	• interprets and represents area and volume using symbols and abbreviations (e.g. m3)			
	• converts units of measurement within the same system and between systems			
	• understands and uses formulas for finding the perimeter, area and volume of simple, common shapes			
	• chooses and performs required operation(s); may make inferences to identify required operation(s)			
	• selects appropriate steps to solutions			

	• interprets, represents and converts measures using whole numbers, decimals, percentages, ratios and simple, common fractions (e.g. ½, ¼)			
	• uses strategies to check accuracy (e.g. estimating, using a calculator, repeating a calculation, using the reverse operation)			
C3.3	• calculates using numbers expressed as whole numbers, fractions, decimals, percentages and integers			
	• understands and uses formulas for finding the perimeter, area and volume of non-rectangular, composite shapes			
	• manages unfamiliar elements (e.g. context, content) to complete tasks			
	• makes estimates involving many factors where precision is required			
	• chooses and performs required operations; makes inferences to identify required operations			
	• selects appropriate steps to solutions from among options			
	• interprets, represents and converts measures using whole numbers, decimals, percentages, ratios and fractions			
	• uses strategies to check accuracy (e.g. estimating, using a calculator, repeating a calculation, using the reverse operation)			

This task was: successfully completed____   needs to be tried again____

Learner Comments

_____   _____

Instructor (print)   **Learner Signature**