



Task Title: Calculate Volume of Soil Required

OALCF Cover Sheet – Practitioner Copy

Learner Name: _____

Date Started: _____

Date Completed: _____

Successful Completion: Yes No

Goal Path: Employment Apprenticeship

Secondary School Post Secondary Independence

Task Description: The learner will calculate the amount of soil needed and total cost to purchase soil for a backyard project.

Main Competency/Task Group/Level Indicator:

- Understand and Use Numbers/Manage money/C1.2
- Understand and Use Numbers/Use measures/C3.2

Materials Required:

- Pen/pencil and paper and/or digital device
- Calculator or digital device with calculator function

Learner Information

Tradespeople and homeowners often calculate soil amounts needed for a project. Making proper calculations ensures enough soil is purchased and extra soil does not go to waste.

Scan the Volume Formula.

Volume Formula

Volume of a square or rectangular object = length x width x height

Work Sheet

Task 1: Calculate the amount of soil required to fill a backyard hole that is 12 feet long, 6 feet wide, 2 feet deep.

Answer:

Task 2: Soil can be purchased in bags of 2 cubic feet. How many bags of soil are needed?

Answer:

Task 3: The soil costs \$13.00 per bag. Calculate the total cost, including HST, to purchase the amount of soil needed.

Answer:

Answers

Task 1: Calculate the amount of soil required to fill a backyard hole that is 12 feet long, 6 feet wide, 2 feet deep.

Answer:

$$\text{Volume} = 12 \times 6 \times 2 = 144 \text{ feet}^3$$

Task 2: Soil can be purchased in bags of 2 cubic feet. How many bags of soil are needed?

Answer: $144/2 = 72$ bags

Task 3: The soil costs \$13.00 per bag. Calculate the total cost, including HST, to purchase the amount of soil needed.

Answer:

$$72 \times 13 = \$936$$

$$\$936 \times 0.13 = \$121.68 \text{ HST}$$

$$\$936 + \$121.68 = \$1,057.68$$

Performance Descriptors

Levels	Performance Descriptors	Needs Work	Completes task with support from practitioner	Completes task independently
C1.2	calculates using numbers expressed as whole numbers, fractions, decimals, percentages and integers			
	calculates percentages			
	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 percentage			
	interprets, represents and converts amounts using whole numbers, decimals, percentages, ratios and simple, common fractions (e.g. $\frac{1}{2}$, $\frac{1}{4}$)			
	uses strategies to check accuracy (e.g. estimating, using a calculator, repeating a calculation, using the reverse operation)			

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C3.2	Calculates using numbers expressed as whole numbers, fractions, decimals, percentages and integers			
	Interprets and represents area and volume using symbols and abbreviations (e.g. m ³)			
	Understands and uses formulas to find 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. 1/2, 1/4)			
	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

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Learner Comments:

Instructor (print):

Learner (print):
