

OALCF Task Cover Sheet

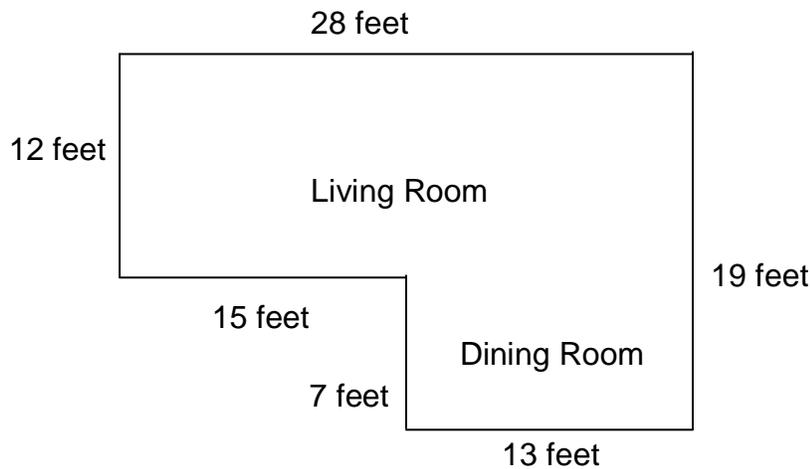
Task Title: Measurement of an L-Shaped Room

Learner Name:	
Date Started:	Date Completed:
Successful Completion: Yes___ No___	
Goal Path: Employment <input checked="" type="checkbox"/> Apprenticeship___ Secondary School___ Post Secondary___ Independence <input checked="" type="checkbox"/>	
Task Description: Learners are required to calculate the materials needed to decorate their 'L' shaped living and dining room. When they have completed all calculations they are required to prepare a job estimate form.	
Competency: A: Find and Use Information C: Understand and Use Numbers	Task Group(s): A1: Read continuous text A2: Interpret documents C1 : Manage money C3: Use Measures
Level Indicators: A1.1: Read brief texts to locate specific details A2.1: Interpret very simple documents to locate specific details A2.2: Interpret simple documents to locate and connect information C1.1: Compare costs and make simple calculations C1.2: Make low-level inferences to calculate costs and expense that may include rates such as taxes and discounts C1.3: Find, integrate, and analyze numerical information to make multi-step calculations to compare cost options and prepare budgets C3.1: Measure and make simple comparisons and calculations C3.2: Use measures to make one-step calculations	
Performance Descriptors: see chart on last page	
Materials Required: <ul style="list-style-type: none">• Paper and Pen• Calculator• Question Sheet (attached)• Answer Sheet (attached)	

Task Title: Measurement of an L-Shaped Room

Task Description: Learners on the independence goal path are required to calculate the amounts of each material needed to decorate their 'L' shaped living and dining room. When they have completed all calculations they are required to prepare a job estimate form. This second activity would be suited to someone wishing to enter the field of construction or interior design, or for someone in the independence goal path who is renovating their home.

You are decorating your 'L' shaped living and dining room. You want to paint the walls, install baseboard and some new flooring, and buy an air conditioner. Please use the diagram of the room below. It has the dimensions of the room. **Note that all the walls are 9 feet high.**



Task 1: Calculate the perimeter of the living room and the dining room together for the length needed for baseboards.

Task 2: Using the length calculated in Task 1, calculate the cost of the baseboard at \$3.99 per foot. (You do not need to add tax).

- Task 3:** Calculate the surface area of the walls of the dining room and living room together.
- Task 4:** You want to apply 2 coats of paint on the walls of the living room and dining room. A gallon of paint covers 300 square feet of wall space. Using the area calculated in Task 3, figure out how many cans of paint you will need to purchase.
- Task 5:** You choose paint for the living room and dining room that costs \$26.25 per gallon. Calculate the total cost of the paint for these rooms. (You do not need to add tax.)
- Task 6:** Calculate the area of the floor.
- Task 7:** Using the area of the floor calculated in Task 6, calculate how much money it would cost (before tax) to put laminate flooring in the dining room and living room. Laminate costs \$3.00 per square foot.
- Task 8:** Calculate the cost (before tax) of purchasing hardwood floor for the living room and dining room. Hardwood costs \$8.00 per square foot.

Task 9: You need an air conditioner that will cool both rooms. You find out that air conditioners are sold by their BTU rating per hour. Using the table below that shows the conversion of cubic feet to BTU/hr, determine the size and price of air conditioner that you will need to purchase. For computing the size of air conditioner needed, calculate the Volume of Living & Dining Room (length x width x height)

Air conditioner - Basic Cooling Capacity		
CU. FT.	BTU/Hr	\$
1,200	3,000	100
1,600	4,000	150
2,000	5,000	175
2,400	6,000	200
2,600	6,500	225
2,900	7,250	250
3,200	8,000	300
3,500	8,750	350
3,860	9,650	400
4,200	10,500	450
5,000	12,500	500

Task 10: Complete the job estimate document below by recording the calculations made in previous tasks.

Job Estimate

Item	Size	Unit cost	Total \$
Baseboard			
Dining Room Floor - laminate flooring			
Paint – Living Room + dining Room			
Air conditioner			
TOTAL			

Answers

Task 1: Using the diagram above, calculate the perimeter of the living room and the dining room together for the length needed for baseboards.

94 feet

Task 2: Using the length calculated in Task 1, calculate the cost of the baseboard at \$3.99 per foot?

94 ft x \$3.99 = \$375.06

Task 3: Using the diagram above, calculate the surface area of the dining room and living room together.

Area of Living Room Walls $(28 + 12 + 12 + 15) \times 9 = 67 \times 9 = 603$ sq feet

Area of dining room walls $(7 + 13 + 7) \times 9 = 27 \times 9 = 243$ sq feet

603+243=846

Task 4: A gallon of paint covers 300 square feet of wall space. If you want to apply 2 coats of paint on the walls of the living room and dining room, calculate the gallons of paint needed.

2 coats of paint on the walls - a gallon of paint covers 300 square feet

a. **For the living room**

603 x 2 = 1206 / 300 = 4 gallons

b. **For the dining room**

243 x 2 = 486 / 300 = 2 gallons

Total required = 6 gallons

Task 5: You choose paint for the living room and dining room that costs \$26.25 per gallon. Calculate is the total cost of the paint for these rooms.

6 gallons x \$26.25 = \$157.50

Task 6: Using the diagram above, calculate the area of the floor.

Dining room floor $(13 \times 7) +$ Living room floor $(28 \times 12) = 91$ sq feet + 336 sq ft

=427 sq ft

Task 7: Using the area of the floor calculated in Task 6, calculate how much money it would cost to put laminate flooring in the dining room and living room. Laminate costs \$3.00 per square foot.

427 sq ft x \$3.00=\$1281.00

Task 8: Calculate the cost of purchasing hardwood floor for the living room and dining room. Hardwood costs \$8.00 per square foot.

427 sq ft x \$8.00 = \$3416.00

Task 9: You need an air conditioner that will cool both rooms. You find out that air conditioners are sold by their BTU rating per hour. Using the table below that shows the conversion of cubic feet to BTU/hr, determine the size and price of air conditioner that you will need to purchase.

Volume of Living & Dining Room

$$(28 \times 12 \times 9) + (13 \times 7 \times 9) = 3024 + 819 = 3,843 \text{ cu ft}$$

Air conditioner - Basic Cooling Capacity		
CU. FT.	BTU/Hr	\$
1,200	3,000	100
1,600	4,000	150
2,000	5,000	175
2,400	6,000	200
2,600	6,500	225
2,900	7,250	250
3,200	8,000	300
3,500	8,750	350
3,860	9,650	400
4,200	10,500	450
5,000	12,500	500

Task 10: Complete the job estimate document below.

Job Estimate

Item	Size	Unit cost	Total \$
Baseboard	94 feet	* \$3.99 / foot	375.06
Laminate flooring	427	3	1281
Paint – Living Room + Dining Room	6	26.25	157.50
Air conditioner	3860	400	400
TOTAL			2213.56

Task Title: Measurement of an L-Shaped Room

Performance Descriptors		Needs Work	Completes task with support from practitioner	Completes task independently
A1.1:	<ul style="list-style-type: none"> • Reads short texts to locate a single piece of information 			
A2.1:	<ul style="list-style-type: none"> • Scans to locate specific details 			
	<ul style="list-style-type: none"> • Interprets brief text and common symbols 			
A2.2:	<ul style="list-style-type: none"> • Uses layout to locate information. 			
C1.1:	<ul style="list-style-type: none"> • Interprets and represents costs using monetary symbols and decimals 			
C1.2:	<ul style="list-style-type: none"> • Represents costs and rates using monetary symbols, decimals and percentages. 			
	<ul style="list-style-type: none"> • Uses strategies to check accuracy (e.g. estimating, using a calculator, repeating a calculation, using the reverse operation) 			
C1.3:	<ul style="list-style-type: none"> • Finds, integrates, and analyses numerical information (e.g. tables, graphs) 			
	<ul style="list-style-type: none"> • Uses strategies to check accuracy (e.g. estimating, using a calculator, repeating a calculation, using the reverse operation) 			
C3.1:	<ul style="list-style-type: none"> • Adds and subtracts whole number measurements 			
	<ul style="list-style-type: none"> • Recognizes values in number and word format 			
	<ul style="list-style-type: none"> • Measures distance, length, width, height, weight, liquid volume, angles, and temperature 			
	<ul style="list-style-type: none"> • Chooses appropriate units of measurement (e.g. centimeters, metres, kilometers) 			
	<ul style="list-style-type: none"> • Uses common standard units (e.g. metres, inches) and non-standard units (e.g. paces, cupfuls, spoonfuls) 			
	<ul style="list-style-type: none"> • Identifies and performs required operation 			
	<ul style="list-style-type: none"> • Interprets and represents measures using whole numbers, decimals, and simple common fractions 			

	<ul style="list-style-type: none"> • Interprets and represents measures using symbols and abbreviations (e.g. inches as “centimeters as cm, pounds as lbs, kilograms as kilos or kg) 			
	<ul style="list-style-type: none"> • Follows apparent steps to reach solutions 			
	<ul style="list-style-type: none"> • Uses strategies to check accuracy 			
C3.2:	<ul style="list-style-type: none"> • Calculates using numbers expressed as whole numbers, fractions, decimals, percentages, and integers 			
	<ul style="list-style-type: none"> • Makes estimates 			
	<ul style="list-style-type: none"> • Interprets and represents area and volume using symbols and abbreviations (e.g. m3) 			
	<ul style="list-style-type: none"> • Understands and uses formulas for finding the perimeter, area, and volume of simple, common shapes 			
	<ul style="list-style-type: none"> • Chooses and performs required operation(s) may make inferences to identify required operation(s) 			
	<ul style="list-style-type: none"> • Selects appropriate steps to solutions 			
	<ul style="list-style-type: none"> • 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