

**Practical Application**

**Calculate the Perimeter  
and Area of a Room**

**Order Trim Materials  
and Flooring**


**Refer to the attached architectural drawing of a bedroom and its closet.**

For this remodeling job you will install the following:

- Porcelain Floor Tile
- Crown Molding (bedroom ceiling *only*)
- Baseboard
- Base Shoe

**A. Perimeter.**

**1-2.** Find the perimeter:

	Length	Width	Perimeter
Bedroom			<b>1.</b>
Closet			<b>2.</b>

**B. Moldings.**

**3-13.** Based on the perimeter of each space, determine how much material (lineal feet) you'll need:

	Crown Molding	Base Board	Base Shoe
Bedroom	<b>3.</b>	<b>6.</b>	<b>10.</b>
Closet	<del> </del>	<b>7.</b>	<b>11.</b>
<b>TOTALS</b>	<b>4.</b>	<b>8.</b>	<b>12.</b>
Add 5% for waste	<b>5.</b>	<b>9.</b>	<b>13.</b>

**Examine the table below.**

**14-22.** Calculate the *price per lineal foot* for each item from each of the lumber yards.

	Acme Lumber Yard	Alhambra Lumber	Lowe's Home Improvement
3 1/8" Crown Molding	16' - 0" @ \$16.00	14' - 0" @ \$15.40	8' - 0" @ \$9.97
Price per lineal foot:	<b>14.</b> \$ _____ . _____	<b>15.</b> \$ _____ . _____	<b>16.</b> \$ _____ . _____
3" Base Board	10' - 0" @ \$8.90	12' - 0" @ \$10.68	12' - 0" @ \$12.48
Price per lineal foot:	<b>17.</b> \$ _____ . _____	<b>18.</b> \$ _____ . _____	<b>19.</b> \$ _____ . _____
1/2" x 3/4" Base Shoe	8' - 0" @ \$5.52	10' - 0" @ \$6.90	8' - 0" @ \$4.48
Price per lineal foot:	<b>20.</b> \$ _____ . _____	<b>21.</b> \$ _____ . _____	<b>22.</b> \$ _____ . _____

Determine the number of *full pieces* of each molding you would need to order from each source, along with the cost.

**Acme Lumber Yard**

**Alhambra Lumber**

**Lowe's Home Improvement**

	# of Pieces	Cost	# of Pieces	Cost	# of Pieces	Cost
Crown Molding	23. _____	24. \$ _____ . _____	25. _____	26. \$ _____ . _____	27. _____	28. \$ _____ . _____
Base Board	29. _____	30. \$ _____ . _____	31. _____	32. \$ _____ . _____	33. _____	34. \$ _____ . _____
Base Shoe	35. _____	36. \$ _____ . _____	37. _____	38. \$ _____ . _____	39. _____	40. \$ _____ . _____

**41-43.** Compare the costs above and *circle* which **41.** crown molding, **42.** base board, and **43.** base shoe will be most economical for your job.

**C. Area**

44-47. Find the area:

	Length	Width	Area
Bedroom			<b>44.</b>
Closet			<b>45.</b>
		TOTAL	<b>46.</b>
		Add 5% for waste	<b>47.</b>

**D. Flooring**

Examine the table below.

**48-50.** Calculate the *price per square foot* for each brand of porcelain floor tile from each of the lumber yards.

**Acme Lumber Yard**

**Alhambra Lumber**

**Lowe's Home Improvement**

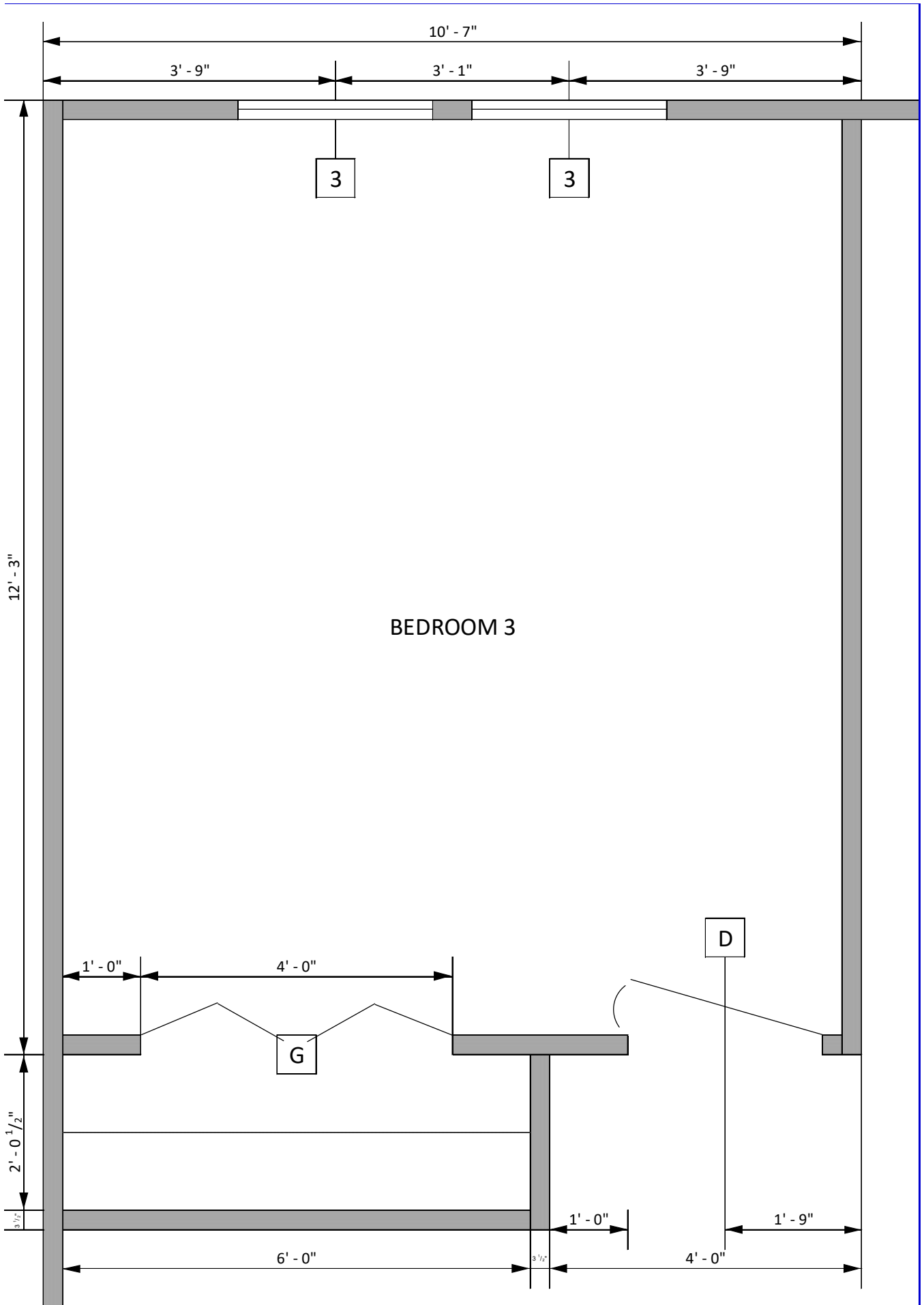
Tile size & price:	12" x 12" @ \$4.95	16" x 16" @ \$8.36	18" x 12" @ \$7.42
Price per <i>square foot</i> :	<b>48.</b> \$ _____ . _____	<b>49.</b> \$ _____ . _____	<b>50.</b> \$ _____ . _____

**51.** Compare the costs above and *circle* which tile will be most economical for your job.

**52.** What will be the *total cost* for your job?

Item	Cost	Which Vendor?
<b>Crown Molding</b>	\$ _____ . _____	_____
<b>Base Board</b>	\$ _____ . _____	_____
<b>Base Shoe</b>	\$ _____ . _____	_____
<b>Floor Tile</b>	\$ _____ . _____	_____
<b>TOTAL</b>	<b>52.</b> \$ _____ . _____	_____





**Enrichment**


**Drywall.**

For the same remodeling job, the homeowners decided that since they were putting in such nice flooring & moldings, they would also like to have new, smooth walls. This requires replacing all of the drywall on the ceiling and walls.

1. Assume the rooms have 8' - 0" tall walls.
2. Do not subtract for window or door areas.
3. Add 5% for waste.
4. Use drywall that is 4' - 0" wide x 8' - 0" long. How many square feet is this? \_\_\_\_\_

Room	Plane	Length	Width	Area
<b>Bedroom</b>	Ceiling			
	Near Wall			
	Far Wall			
	Left Wall			
	Right Wall			
<b>Closet</b>	Ceiling			
	Near Wall			
	Far Wall			
	Left Wall			
	Right Wall			
<b>TOTAL SQUARE FEET</b>				
<b>+ 5% for Waste</b>				

How many sheets of drywall will you need? \_\_\_\_\_