

Measurements/Geometry: Handyman – Remodeling

Home Improvement & Repair

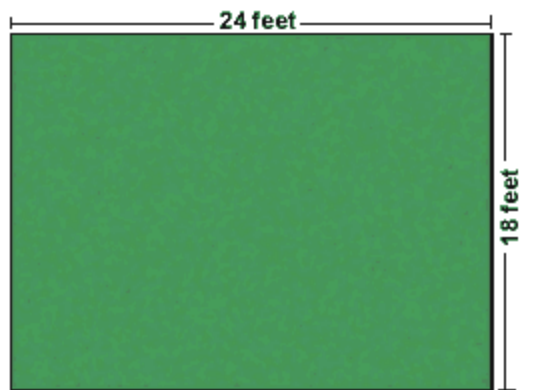
Job Description: Provide cost estimates to customers for home projects.

Problem:

The cost of carpet is \$13.00/square yard and the cost to install the carpet is \$5.00/square yard. The cost of hardwood flooring is \$7.00/square foot and the installation cost is \$2.00/square foot.

Jon's family room measures 18 feet x 24 feet.

- 1) What is the cost for carpet, including installation?
- 2) What is the cost for hardwood flooring, including installation?
- 3) What is the total cost for hardwood, including installation, around a perimeter four feet wide; and carpet, including installation, in the remaining middle area of the family room floor?



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See problem page for details.

Solution:

1. What is the cost for carpet, including installation?

carpet = \$13/sq. yd.
 Installation = \$5/sq .yd.

hardwood = \$7/sq. ft.
 installation = \$2/sq. ft.

24 ft. x 18 ft. = 432 sq. ft of carpet needed

\$13 (carpet) + \$5 (installation) = \$18/sq .yd. installed carpet

432 sq. ft. / 9 sq. ft. = 48 sq x \$18/sq .yd. = \$864 for carpet

2. What is the cost of hardwood flooring including installation?

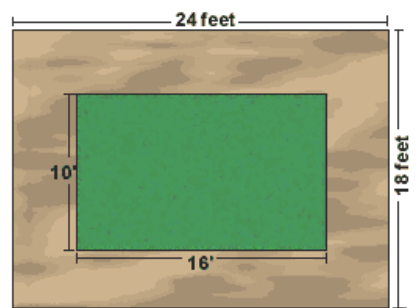
432 sq. ft. x \$9/sq. ft. = \$3,888 for hardwood floor

3. What is the total cost for the hardwood and carpet as described.

(hardwood with carpet)

carpet = \$13/sq .yd.
 installation = \$5/sq .yd.

hardwood = \$7/sq. ft.
 installation = \$2/sq. ft.



(24 ft. x 18 ft.) - (16 ft. x 10 ft.) = 272 sq. ft. of hardwood needed

\$7 (hardwood) + \$2 (installation) = \$9/sq .yd. installed hardwood

272 sq. ft. x \$9/sq. ft. = \$2,448 for hardwood

(16 ft. x 10 ft.) / 9 sq. ft. = 17.77 sq .yd. of carpet needed

17.77 sq .yd. x \$18/sq .yd. = \$320 for carpet

\$2,448 + \$320 = \$2,768 total for hardwood and carpet