Name: _Key_

Advanced Area Applications Real World Example

Floor plan with dimensions: 49' total width top; 19', 2', 18' across top. Rooms labeled: Master Bedroom (19', 8', 4'), Living Room (2'), Bedroom 2, closet, Patio, 19', 10', 11' left side; closet, Bath #1, Dining Room (5'), Hallway, Kitchen (16'), Bath #2 (3'), Laundry (9', 5'), Garage (18', 20', 16').
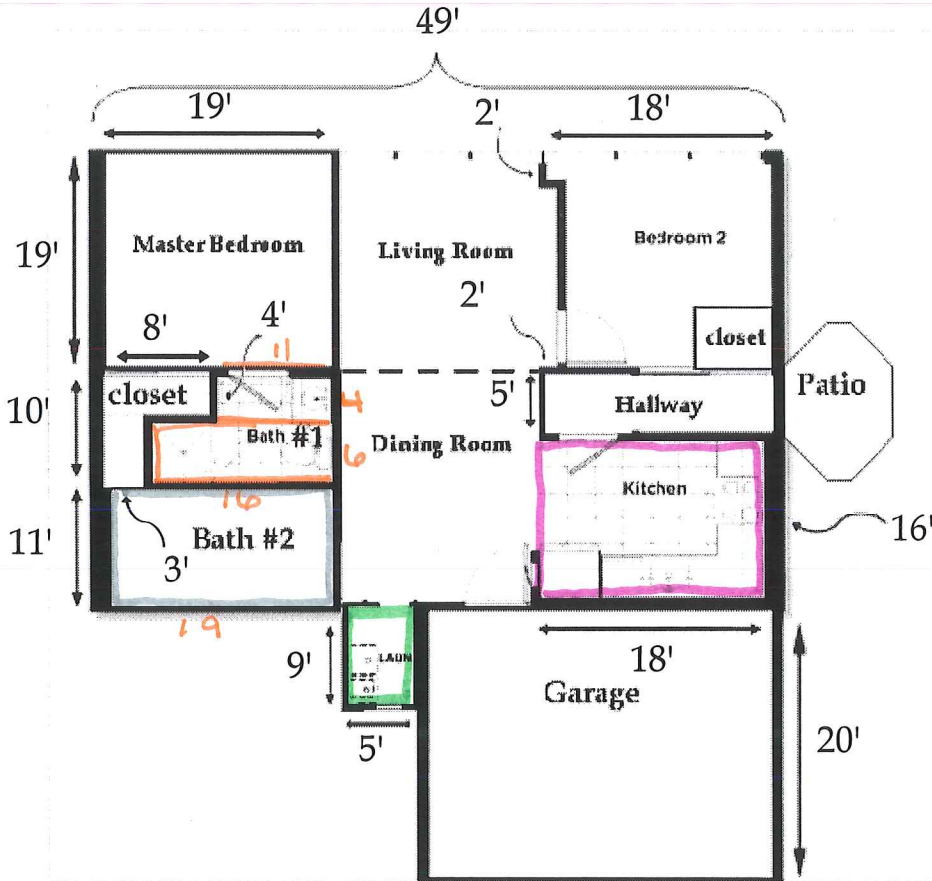
1. The Vargas want to tile (both) bathrooms, the kitchen and laundry room. (a) Find the total square footage of the area needing to be tiled. (b) How many 6in x 6in tiles will they need for this project? (c) If Lowes offers a tile for $0.38 if you buy more than 1,000 tiles or $0.33 if you buy more than 2000 and Home Depot has tiles on sale for 30% off at an original cost of $0.45, which deal is the better deal? (d) What would the sub total and total (with 6% sales tax) cost for this project comes out to be?

a.)

Bath #1: $11 \times 4 + 6 \times 16 = 140 \text{ft}^2$

Bath #2: $19 \times 11 = 209 \text{ft}^2$

Kitchen: $16 \times 18 = 288 \text{ft}^2$

Laundry: $9 \times 5 = 45 \text{ft}^2$

Total square footage: 682ft^2 (add them up)

b.) How many 6in x 6in tiles?

4 tiles per sq. foot

$682 \times 4 = 2,728$ tiles needed

c.) We buy more than 2000 tiles @ Lowes: @ .33

Lowes = $2728 \times .33 = \$900.24$

Home Depot: 30% off

$.45 \times .3 = .135$ so $.45 - .14 = .31$ for each tile

H.D: $2728 \times .31 = \$845.68$

d.) sub total: $845.68

tax = $845.68 \times .06 = \$50.74$

Total cost = $896.42