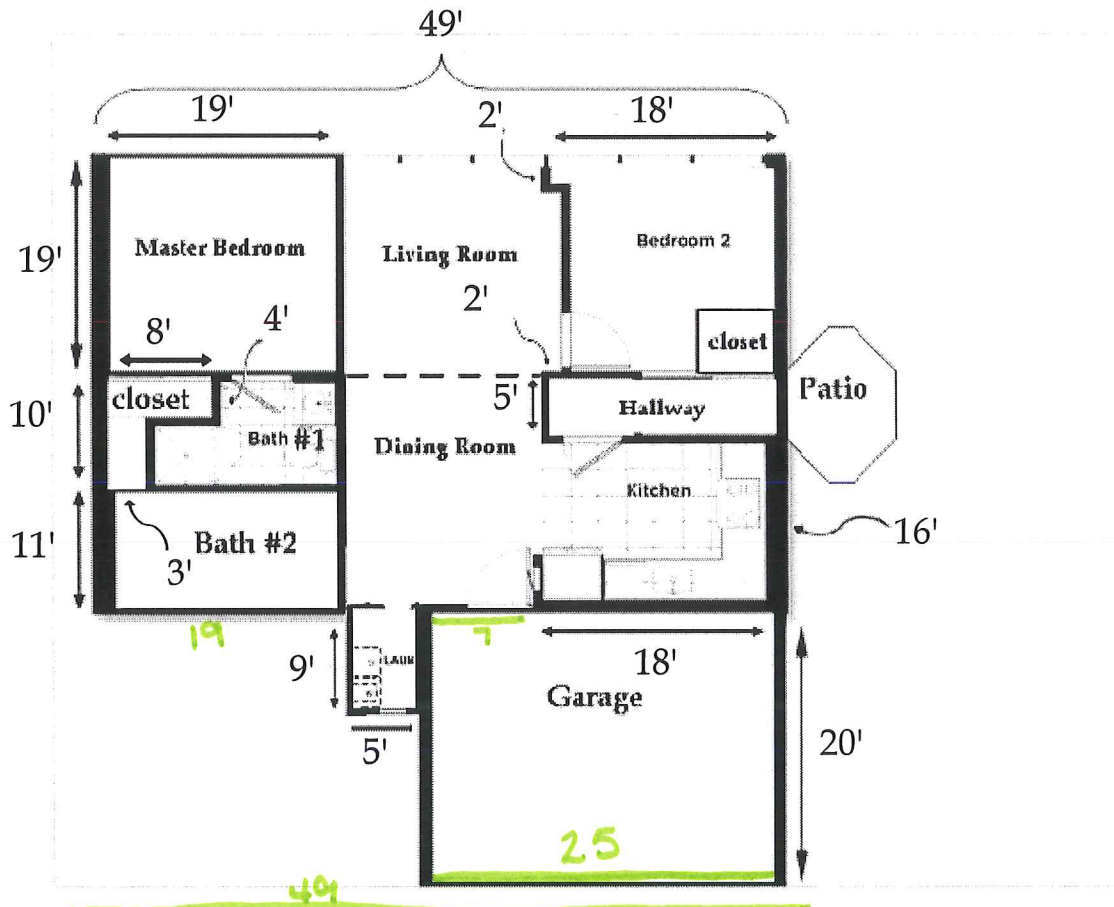# Advanced Area Applications HW Day 2

1. Your 1960 Mustang has been leaking oil and has left stains on your garage floor. You want to paint your floor to cover up the stains. (a) What is the total square footage of the garage floor which needs to be painted? (b) The paint you want to use only comes in full gallon sizes. If one gallon of paint covers 75ft², how many FULL gallons of paint will you need to paint TWO coats on the garage floor? (c) If each gallon costs $22.94 what is the sub total cost of the paint? What is the total cost?

a.) total Area
of garage: 25 × 20 = 500 ft²

b.) How many gallons
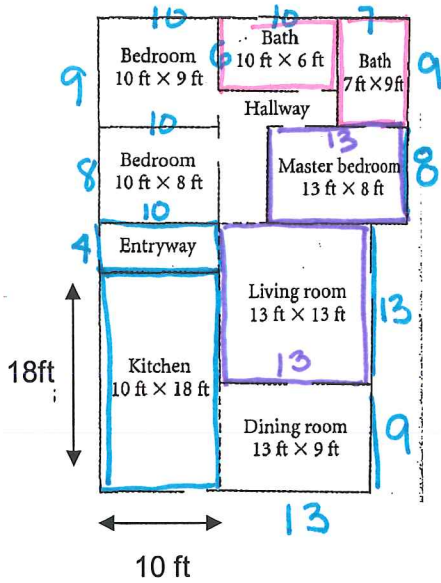to paint 2 coats?
500 × 2 = 1,000 ft² to
Paint
1000 ÷ 75 = 13.3 → must
buy full gallons so
14 gallons of
Paint

total cost w/o tax
c.) 14 × 22.94
= $321.16

tax = 321.16 × .06
tax = $19.27

Total w/ tax

$340.43

2. (a) Gina's family wants to install 1-foot-square terra cotta tiles in the entryway and kitchen, and 6-inch-square blue tiles on each bathroom floor. The terra cotta tiles cost $5 each, and the bathroom tiles cost 45¢ each. How many of each kind will they need? What will the tiles cost before taxes? (b) Gina's family would also like to install new carpeting in the living room and master bedroom. The carpeting costs $16 per square yard and an extra $4 per square yard for padding. How much will the new carpeting cost Gina's family before taxes? Round to nearest square yard.

Floor plan diagram:
- Bedroom 10 ft × 9 ft
- Bath 10 ft × 6 ft
- Bath 7 ft × 9 ft
- Hallway
- Bedroom 10 ft × 8 ft
- Master bedroom 13 ft × 8 ft
- Entryway
- Living room 13 ft × 13 ft
- Kitchen 10 ft × 18 ft
- Dining room 13 ft × 9 ft
- Dimensions labeled: 18 ft, 10 ft, 13

a) **Terra cotta tiles**

Entryway: $4 \times 10 = 40\,ft^2$

Kitchen: $10 \times 18 = 180\,ft^2$

total for terra cotta tiles:

$A_T = 220\,ft^2$ ← We need 220 1×1 terra cotta tiles

Cost $= 220 \times 5 = \$1,100.^{00}$

cost befor taxes for terra cotta tiles

Blue Square tiles

Bathrooms: $10 \times 6 = 60\,ft^2$
$7 \times 9 = 63\,ft^2$

Total area of bathrooms:
$A_T = 123\,ft^2$

Total tiles: $123 \times 4 = 492$ tiles

total cost for 6×6 in tiles $= 492 \times .45 = \$221.40$ blue

How many 6×6 inch tiles are in a square foot?

for every sq. foot there are 4 6×6 inch tiles.

Convert to square yds.
$\frac{273}{9} = 30.3\,yd^2$
Round to Next yd^2
$A = 31\,yd^2$

b.) Carpet:
Living room: $13 \times 13 = 169\,ft^2$
master bed: $13 \times 8 = 104\,ft^2$
Total Square feet $= 273\,ft^2$

Padding: $31 \times \$4 = \$124.^{00}$
Carpet: $31 \times \$16 = \$496.^{00}$

Total cost of carpet!
$\$620.^{00}$