

Lesson 4
Homework/Practice

Pg 85 1 $(11' - 0'')^2 =$

121 ft^2

4 $(6' - 9'')^2 =$

45.6 ft^2

7 $4' - 10'' \times 8' - 2''$

39.5 ft^2

10 Perimeter = $(2 \times 18') + (2 \times 24') = 84'$
wall area = $84' \times 8' =$

672 ft^2

Pg 87 22 $8' - 6'' \times 1 \frac{1}{4}'' = .89 \text{ ft}^2$
 $8' - 6'' \times 3'' = 2.13 \text{ ft}^2$
 $8' - 6'' \times (25'' - 1 \frac{1}{4}'') = 16.82 \text{ ft}^2$
 $8' - 6'' \times 1 \frac{1}{4}'' = .89 \text{ ft}^2$

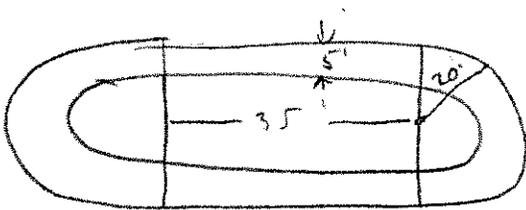
Total area \times price.
 $20.73 \text{ ft}^2 \times \frac{\$2.65}{\text{ft}^2} =$ 54.93 ft^2

PG 101 2

$\pi \times (6' - 0'')^2 =$

16286 in^2

PG 103 12



BIG AREA

$35' \times 40' = 1400 \text{ ft}^2$
 $\pi (20')^2 = 1257 \text{ ft}^2$
 2657 ft^2

SMALL AREA

$35' \times 30' = 1050 \text{ ft}^2$
 $\pi (15')^2 = 707 \text{ ft}^2$
 1757 ft^2

BIG - SMALL

$2657 \text{ ft}^2 - 1757 \text{ ft}^2 =$

900 ft^2

Pg 86 15. You have been asked to give a price for the shingling job shown. The homeowner just wants a rough idea of the cost of this job.

1. Without using a calculator, estimate the square feet of roof covered.

ROUND 15'-9" UP TO 16'
42'-6" DOWN TO 40'

EACH SIDE = 640 ft²
2 SIDES =

1280 ft²

2. You charge \$1.85/sq ft for simple shingling jobs such as this. Again, without using your calculator, give a rough estimate of the cost of this job. Your estimate should be on the high side because it's always better to estimate high and charge less than to estimate low and charge more.

ROUND AREA UP TO 1300 ft²
PRICE UP TO \$2/ft²

$$1300 \text{ ft}^2 \times \frac{\$2}{\text{ft}^2} =$$

\$2600

3. Time to get back to office and write up the proposal.

- a. Calculate the square footage of the roof. (Round your answer to the square foot.)

$$15'-9" \times 42'-6" = 669 \text{ ft}^2$$

$$669 \text{ ft}^2 \times 2 \text{ sides} =$$

1339 ft²

- b. How much will you charge the customer? (Round to the nearest dollar.)

$$1339 \text{ ft}^2 \times \frac{\$1.85}{\text{ft}^2} = \$2477.15$$

\$2477

- c. Now add 10% to the price you found in b. to cover overhead.

$$\$2477 \times 1.1 =$$

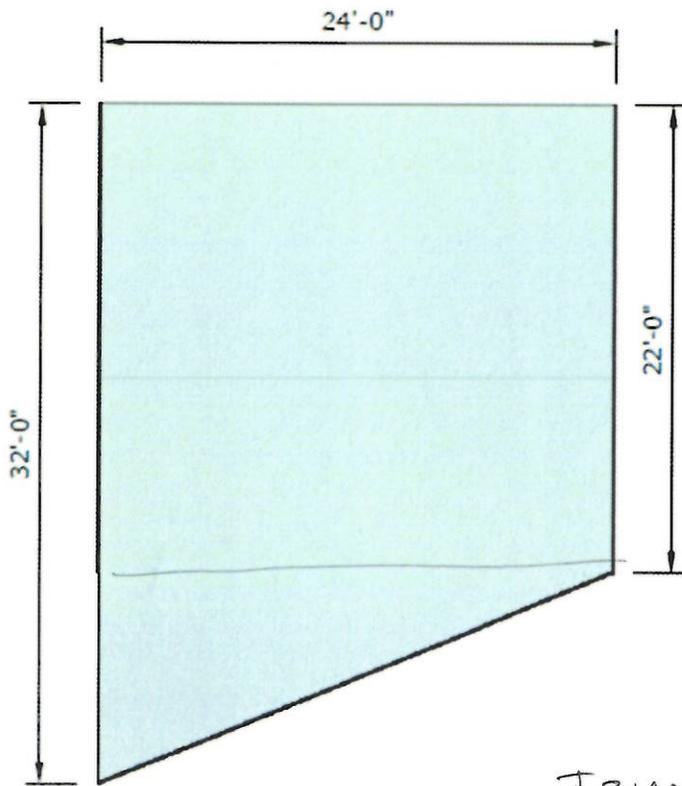
\$2725

- d. Finally, determine how many bundles of shingles you should order if each bundle covers 33 sq ft of the roof.

$$1339 \text{ ft}^2 \div \frac{33 \text{ ft}^2}{\text{bundle}} = 40.6 \text{ bundles} \uparrow$$

41 bundles

4. You have been hired to build a house with the crazy shape shown below. Calculate the area of floor.



TRIANGULAR AREA:

$$\frac{(32'-0'' - 22'-0'') \times 24'-0''}{2} = 240 \text{ ft}^2$$

RECTANGULAR AREA:

$$22'-0'' \times 24'-0'' = 528 \text{ ft}^2$$

TOTAL AREA:

$$528 \text{ ft}^2 + 240 \text{ ft}^2 = 768 \text{ ft}^2$$