

Warm-Up (Big issue on the recent test #16)

If you earn a commission of \$5290 on selling insurance worth \$90,150, what was your commission rate? Round to nearest whole percent.

$$\begin{array}{l} \text{amount} \cdot \text{com.} \\ \text{Sales} \cdot \text{rate} = \text{amount} \\ \text{commission} \\ \hline \cancel{90150} \cdot X = \frac{5290}{90150} \leftarrow \text{inside} \\ \hline 90150 \\ \\ X = 0.058 \\ \quad \quad \quad \underbrace{\quad \quad \quad}_{5.8\%} \rightarrow 6\% \end{array}$$

7.2 Rectangles and Squares

Definition: ↓

2 set congruent sides
4 right angles
4 sides

4 equal sides
4 right angles
4 sides

Perimeter of Rectangle

$$P = 2l + 2w$$

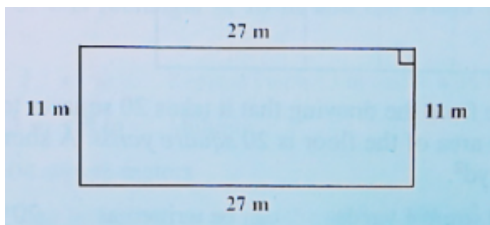
Perimeter of Square

$$P = 4s$$

UNITS!!! ⇒ linear → 1 dimension (ft)

Ex 1 Find the Perimeter

a)



$$P = 2l + 2w$$

$$P = 2(27) + 2(11)$$

$$P = 54 + 22$$

$$P = 76m$$

b) A rectangle 8.9 ft by 12.3 ft

$$P = 2l + 2w$$

$$P = 2(12.3) + 2(8.9)$$

$$P = 24.6 + 17.8$$

$$P = 42.4 \text{ ft}$$

$$\begin{array}{r} 24.6 \\ + 17.8 \\ \hline \end{array}$$

Area of Rectangle

$$A = l \cdot w$$

Area of Square

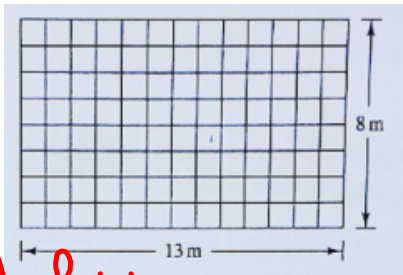
$$A = s \cdot s = s^2$$

UNITS!!!! \Rightarrow 2 dimensional

Ex 2 Find the Area

 cm^2
 sq cm

a)



$$A = l \cdot w$$

$$13(8) = 104 \text{ m}^2$$

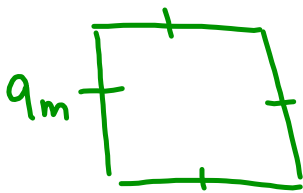
b) rectangle measuring 7cm by 21cm

$$A = 7(21)$$

$$A = 147 \text{ cm}^2$$

Ex 4 Find the Perimeter and Area of a Square

a) A square that measures 9m each side



$$P = 4s$$

$$4(9)$$

$$P = 36 \text{ m}$$

$$A = s^2$$

$$(9)^2$$

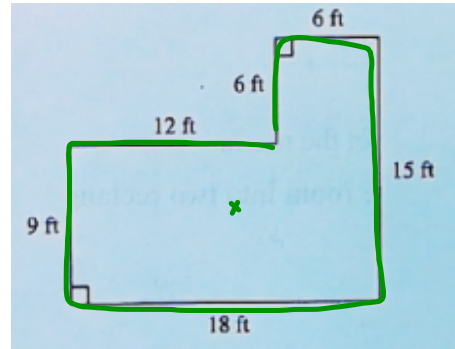
$$A = 81 \text{ m}^2$$

Ex 4 Area and Perimeter of Composite Figure

a) Floor plan, and you want to wallpaper the top border. How much will you need?

Find Perimeter

$$\begin{array}{r}
 \cancel{9} + \cancel{12} + \cancel{6} + \cancel{6} + 15 + 18 \\
 27 + 24 + 15 \\
 24 + 24 + 15 \\
 + 1.5 \\
 \hline
 66 \text{ ft} \text{ of wallpaper}
 \end{array}$$

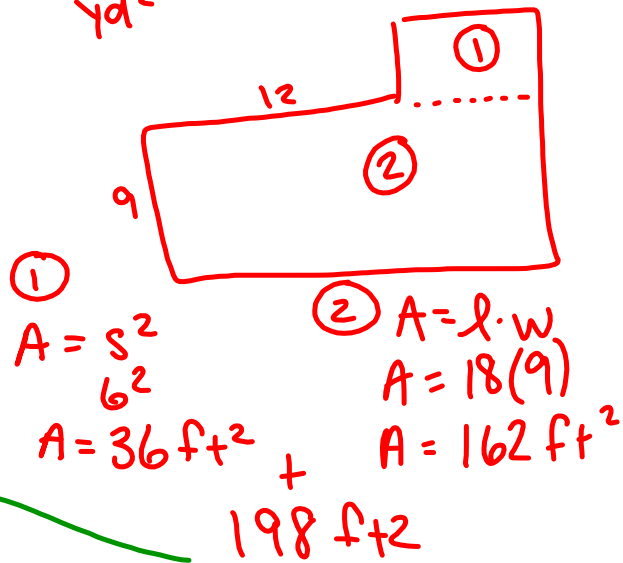


b) Carpet will cost \$20.50 per square yard. How much will you spend?

Find Area

Convert unit

$$\frac{1 \text{ yd}}{3 \text{ ft}} \quad \frac{1 \text{ yd}^2}{9 \text{ ft}^2}$$



convert

$$\frac{198 \text{ ft}^2}{9 \text{ ft}^2} = 22 \text{ yd}^2$$

need $22 \text{ yd}^2 \cdot 20.50$

$\$451$ total cost