

2.4

Area of a rectangle

$$A = l \cdot w$$



(ex) Your kitchen is 10 ft by 12 ft. What's the area (assume it's rectangular)

$$A = 10 \text{ ft} \times 12 \text{ ft}$$

$$= 120 \text{ ft}^2$$

We can solve formulas just like we solved equations.

(ex) Solve $A = lw$ for l .

$$\frac{A}{w} = \frac{l \cdot w}{w}$$

$$\frac{A}{w} = l$$

Perimeter of a rectangle

$$P = 2l + 2w$$

(ex) Solve $P = 2l + 2w$ for w

$$\frac{P - 2l}{2} = \frac{2w}{2}$$

$$\frac{P - 2l}{2} = w$$

Percents

Ⓧ If I say 75% of people like pizza.
This means that 75 out of 100 people like pizza.

• 14% → 14 out of 100

• 93.25% → 93.25 out of 100

You can rewrite % as decimals

↳ move decimal 2 places to the left

Ⓧ 75% = .75

• 93.25% = .9325

Can write decimals as %

↳ move decimal point 2 places to right (if odd)

Ⓧ .58 = 58%

• .375 = 37.5%

Formulas for percents. (hints: "is" means =, "of" means ×
use variable(s) for unknown(s))

Ⓧ What is 10% of 30?

$$\begin{array}{ccccccc} \downarrow & & \downarrow & & \downarrow & & \downarrow \\ x & = & .10 & \times & 30 \end{array}$$

$$x = .10 \times 30$$

$$x = 3 \quad \text{so } 3 \text{ is } 10\% \text{ of } 30.$$

Note: In calculations always use decimal version of a percent!

(ex) 6 is 30% of what?

$$\begin{array}{ccccccc} \downarrow & \downarrow & \downarrow & \downarrow & & \downarrow & \\ 6 & = & .30 & \times & & X & \\ \hline .30 & & .30 & \times & & X & \end{array}$$

20 = X 6 is 30% of 20

(ex) 8 is what percent of 32?

$$\begin{array}{ccccccc} \downarrow & \downarrow & & \downarrow & & \downarrow & \\ 8 & = & & X & & \times & 32 \\ \hline 8 & = & X & \times & 32 \\ 32 & & 32 & & & & \end{array}$$

.25 = X so 8 is 25% of 32