

Percent Proportion

1/06/2021
Wed.

$$\frac{\text{Part (is)}}{\text{Whole (of)}} = \frac{\text{Percent (\%)}}{100} \rightarrow \text{this never changes.}$$

Missing Part:

$$\frac{x}{50} \times \frac{10}{100}$$

cross-multiply
and divide
(CMAD)

$$100x = 50(10)$$

$$\frac{100x}{100} = \frac{500}{100}$$

$$\boxed{x = 5}$$

Missing Whole:

$$\frac{5}{x} \times \frac{10}{100}$$

$$10x = 5(100)$$

$$\frac{10x}{10} = \frac{500}{10}$$

$$x = 50$$

$$\boxed{x = 50}$$

Missing Percent:

$$\frac{5}{50} \times \frac{x}{100}$$

$$50x = 5(100)$$

$$\frac{50x}{50} = \frac{500}{50}$$

$$x = 10$$

$$\boxed{x = 10}$$

Guided Practice:

1. 18 is 30% of what #?

$$\frac{18}{x} = \frac{30}{100}$$

$$\frac{30x}{30} = \frac{1800}{30}$$

$$x = 60$$

2. What % of 20 is 7?

$$\frac{7}{20} = \frac{x}{100}$$

$$\frac{20x}{20} = \frac{700}{20}$$

$$x = 35$$

3. What is 35% of 590?

$$\frac{x}{590} = \frac{35}{100}$$

$$\frac{100x}{100} = \frac{20,650}{100}$$

$$x = 206.5$$

Independent Practice

1. $\frac{x}{80} = \frac{42}{100}$

$$\frac{100x}{100} = \frac{3,360}{100}$$

$$x = 33.6$$

2. $\frac{21}{x} = \frac{15}{100}$

$$\frac{15x}{15} = \frac{2100}{15}$$

$$x = 140$$

$$3) \frac{45}{150} = \frac{x}{100}$$

$$\frac{150x = 4500}{150 \quad 150}$$

$$\boxed{x = 30}$$

$$4) \frac{x}{200} = \frac{98}{100}$$

$$\frac{100x = 19600}{100 \quad 100}$$

$$\boxed{x = 196}$$

$$5) \frac{x}{35} = \frac{30}{100}$$

$$\frac{100x = 1050}{100 \quad 100}$$

$$\boxed{x = 10.5}$$

$$6) \frac{14}{x} = \frac{25}{100}$$

$$\frac{25x = 1400}{25 \quad 25}$$

$$\boxed{x = 56}$$

$$7.) \frac{x}{70} = \frac{54}{100}$$

$$\frac{100x = 3,780}{100 \quad 100}$$

$$\boxed{x = 37.8}$$

$$8.) \frac{28}{33} = \frac{x}{100}$$

$$\frac{33x = 2800}{33 \quad 33}$$

$$x \approx 84.85$$
$$\hookrightarrow \boxed{x = 85}$$