

Content and Language Objective:

Students will be able to setup proportions to model and solve real-world problems and write about what the solution represents in the real-world.

Warm-Up

1. $\frac{12}{5} = \frac{x}{21}$

$$\frac{21 \cdot 12}{5}$$

$$\frac{252}{5} \boxed{50.4}$$

2. $\frac{12}{17} = \frac{5}{x+2}$

$$\frac{5 \cdot 17}{12} = x + 2$$

$$\begin{aligned} \frac{85}{12} &= x + 2 \\ 7.08 &= x + 2 \\ -2 &\quad -2 \end{aligned}$$

$$\boxed{x = 5.08}$$

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- Setting up a percent proportion:

$$\frac{\text{Part}}{\text{Whole}} = \frac{\%}{100} \quad \text{or} \quad \frac{\text{is}}{\text{of}} = \frac{\%}{100}$$

Part is percent (%) of whole?

- Can be solved by cross-multiplication.

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Practice:

1. In a capture-recapture process, 200 fish were tagged. From the recapture results, the game warden estimates that the lake contains 2500 fish. What percent of the fish were tagged?

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Practice

2. IN a lake with 250 tagged fish, tecapture results show that 11% of the fish are tagged. About how many fish are in the lake?

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Practice

3. What number is 25% of 250?

Part: x	$\frac{x}{250} = \frac{25}{100}$
Whole: 250	
%: 25	$\frac{250 \cdot 25}{100} = x$
	$62.5 = x$

