

Accelerated Math Notes

The Percent Proportion

(Section 6-1)

$$\frac{\text{part}}{\text{whole}} = \frac{\text{percent}}{100}$$

Quick Review of Methods to Solve Proportions

Concept of Equivalent ratios

$$\frac{4 \times 3}{9 \times 3} = \frac{n}{27}$$

$$n = 12$$

Simplify one ratio first - Then use equivalent ratios

$$\frac{6}{9} = \frac{n}{30}$$

$$\frac{2 \times 10}{3 \times 10} = \frac{n}{30}$$

Cross Products are Equivalent Use Algebraic Steps

$$\frac{n}{23} = \frac{1.5}{16}$$

$$n(16) = 23(1.5)$$

$$16n = 34.5$$

$$\frac{16n}{16} = \frac{34.5}{16}$$

$$n = 2.15625$$

$$\frac{n}{27} = \frac{2.5}{100} \quad 67.5$$

$$n = 0.675$$

$$n = 20$$

What percent of 258 is 75?

If necessary, Round to the nearest tenth.

$$\frac{\text{part}}{\text{whole}} = \frac{\text{percent}}{100}$$

$$\frac{75}{258} = \frac{n}{100}$$

$$n \approx 29.069$$

$$29.1$$

What percent of 28 is 36?

If necessary, Round to the nearest tenth.

$$\frac{\text{part}}{\text{whole}} = \frac{\text{percent}}{100}$$

$$\frac{36}{28} = \frac{n}{100}$$

$$n \approx 128.571$$

$$128.6$$

65 is 125% of what number?

Round to the nearest tenth if necessary.

$$\frac{65}{n} = \frac{125}{100}$$

$$n = 52$$

What number is 2.57% of 40?

Round to the nearest tenth if necessary.

$$\frac{n}{40} = \frac{2.57}{100}$$

$$n = 1.028$$

$$102.8$$

If 62 of 350 students are in band, what percent are in band?
If necessary, round to the nearest tenth of a percent.

$$\frac{\text{band}}{\text{all}} = \frac{62}{350} = \frac{n}{100}$$

$$n \approx 17.714$$

17.7%

3.5% of the students at LMS have red hair. If there are 28 students with red hair, how many students are at LMS?
If necessary, round to the nearest whole number.

$$\frac{\text{red}}{\text{all LMS}} = \frac{28}{n} = \frac{3.5}{100}$$

$$n = 800$$

800 students

Of the 45 math tests, 28% were A's. How many students had an A on the test? If necessary round to the nearest whole number.

$$\frac{\text{A's}}{\text{All tests}} = \frac{n}{45} = \frac{28}{100}$$

$$n = 12.6$$

≈ 13 students had A's

How many different ways can you find to calculate 60% of 1200 both with and without a calculator?

60% of 1200

$$\frac{60}{100} = \frac{n}{1200}$$

$$10\% \times 6$$

$$120 \times 6$$

$$720$$

$$15\% \times 4$$

$$10\% + 5\%$$

$$120 + 60$$

$$180 \times 4$$

$$720$$

$$50\% + 10\%$$

$$600 + 120$$

$$720$$

$$0.6(1200)$$

$$720$$