math Antics
Exercises

Name: _____

Date: _____

Proportions

1 Find the missing number 'n' by cross multiplying.

$$\frac{n}{8} = \frac{3}{4}$$

$n \times 4 = 8 \times 3$

$\frac{n \times 4}{4} = \frac{24}{4}$

$n = 6$

2 Find the missing number 'n' by cross multiplying.

$$\frac{3}{2} = \frac{n}{12}$$

$3 \times 12 = 2 \times n$

$\frac{36}{2} = \frac{2 \times n}{2}$

$n = 18$

3 Find the missing number 'n' in this proportion by cross multiplying.

$$\frac{60 \text{ mi}}{5 \text{ hr}} = \frac{n \text{ mi}}{8 \text{ hr}}$$

$60 \times 8 = 5 \times n$

$\frac{480}{5} = \frac{5 \times n}{5}$

$n = 96$ mi

4 A factory makes 12 bikes in 3 hours. If it keeps making bikes at the same rate, how many bikes will it have made in 8 hours? *(hint: set up a proportion.)*

$\frac{12 \text{ bikes}}{3 \text{ hrs}} = \frac{n \text{ bikes}}{8 \text{ hrs}}$

$12 \times 8 = 3 \times n$

$\frac{96}{3} = \frac{3 \times n}{3}$

$n = 32$ bikes

5 If it takes 2 cups of flour to make 45 cookies, how many cups of flour will it take to make 135 cookies? *(hint: set up a proportion.)*

$\frac{2 \text{ cups}}{45 \text{ cookies}} = \frac{n \text{ cups}}{135 \text{ cookies}}$

$2 \times 135 = n \times 45$

$\frac{270}{45} = \frac{n \times 45}{45}$

$n = 6$ cups

6 On a map, two cities measure 6.2 cm apart. If the scale of the map is 5 cm per 10 miles, then how many miles apart are the cities? *(hint: set up a proportion.)*

$\frac{5 \text{ cm}}{10 \text{ mi}} = \frac{6.2 \text{ cm}}{n \text{ mi}}$

$5 \times n = 10 \times 6.2$

$\frac{5 \times n}{5} = \frac{62}{5}$

$n = 12.4$ mi

See Video for step-by-step solutions to each problem.