5.3 Writing and Solving Proportions p.180

ALWAYS ASK YOURSELF IF YOUR ANSWER IS REASONABLE?????

1.

	Last Month	This Month
Purchase	2 ringtones	3 ringtones
Total Cost	6 dollars	x dollars

$\dfrac{ringtones}{\$}$ $\dfrac{2}{6} = \dfrac{3}{x}$ $\boxed{\$9}$

2.

	Original Recipe	New Recipe
Black Beans	1.5 cups	6 cups
Tomatoes	1 tomato	x tomatoes

$\dfrac{beans}{tomatoes}$ $\dfrac{1.5}{1} = \dfrac{6}{x}$ $\boxed{4 \text{ tomatoes}}$

★ ③ test worth 150 points; test score of 96% → $\dfrac{96}{100}$ (% means out of 100)

$\dfrac{x}{150} = \dfrac{96}{100}$ $\boxed{144 \text{ points}}$

4. A school has 950 students. The ratio of female students to all students is 48 to 95. How many students are female?

$\dfrac{female}{total}$ $\dfrac{x}{950} = \dfrac{48}{95}$ $\boxed{480 \text{ female students}}$

5. The ratio of quarts to gallons is 4:1. If a recipe calls for 14 quarts, how many gallons would be needed?

$\dfrac{quarts}{gallons}$ $\dfrac{4}{1} = \dfrac{14}{x}$ $\boxed{3.5 \text{ gallons}}$

6. You estimate that you can do 12 math problems in 30 minutes. How long will it take you to do 20 problems?

$\dfrac{problems}{minutes}$ $\dfrac{12}{30} = \dfrac{20}{x}$ $\boxed{50 \text{ minutes}}$

7. You can paint 420 square feet of a wall in 36 minutes with your new sprayer. How many square feet can you paint in 30 minutes?

$$\frac{minutes}{sq\ ft} \qquad \frac{36}{420} = \frac{30}{x} \qquad \boxed{350\ sq\ ft}$$

★ 8. 6 apples weigh about 1.5 pounds. Apples are on sale at Vons for $1.20/pound. How much will 10 apples cost?

$$\frac{apples}{pounds} \qquad \frac{6}{1.5} = \frac{10}{x}$$

$$2.5\ lbs$$

$$\begin{array}{r} 1.20 \\ \times 2.5 \\ \hline \boxed{\$3.00} \end{array}$$

9. A test is worth 40 points. What is needed to get a 75%?

$$\frac{x}{40} = \frac{75}{100} \qquad \frac{75}{100}$$

$$\boxed{30\ points}$$

★ 10. There are 156 marbles in a bag. The ratio of red to blue is 8:5. How many marbles are red? How many are blue?

red = __96__   blue = __60__   13

$$\frac{red}{total} \qquad \frac{x}{156} = \frac{8}{13}$$

$$\frac{blue}{total} \qquad \frac{x}{156} = \frac{5}{13}$$