Practice 5.1 Ratios, Rates & Proportions

Name_____

Write the ratio as a ratio of whole numbers using fractional notation. Write the fraction in simplest form.

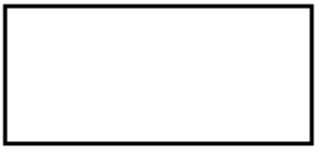
1) 39 to 33

2) 3.4 to 10

Find the ratio described as a fraction in simplest form.

3) Find the ratio of the width to the perimeter of the rectangular garden sketched below.

width = 5 meters



length = 12.5 meters

Write the rate as a fraction in simplest form.

4) 10 cars for 70 people

Write the rate as a unit rate.

5) 126 miles in 6 hours

Determine whether the proportion is a true proportion.

6) $\frac{42}{54} = \frac{7}{9}$

7) $\frac{15}{14} = \frac{7}{15}$

For the proportion, find the unknown number n.

8) $\frac{n}{5} = \frac{6}{15}$

9) $\frac{16}{48} = \frac{4}{n}$

10) $\frac{40}{n} = \frac{10}{\frac{1}{10}}$

11) $\frac{0.6}{4.2} = \frac{5}{n}$

12) $\frac{\frac{1}{3}}{\frac{3}{9}} = \frac{17}{n}$

13) $\frac{n}{\frac{11}{13}} = \frac{2\frac{1}{6}}{1\frac{1}{10}}$

Solve.

14) The ratio of a basketball player's completed free throws to attempted free throws is 5 to 6. If she completed 20 free throws, find how many free throws she attempted. Round to the nearest whole number if necessary.

15) On an architect's blueprint, 1 inch corresponds to 8 feet. Find the length of a wall represented by a line $5\frac{1}{4}$ inches long on the blueprint. Round to the nearest tenth if necessary.

16) The scale on a map states that 1 centimeter corresponds to 30 kilometers. On the map, two cities are 0.7 cm apart. Find the actual distance.

17) A bag of fertilizer covers 2000 square feet of lawn. Find how many bags of fertilizer should be purchased to cover a rectangular lawn 160 feet by 120 feet.

18) The adult daily dosage for a certain medicine is 150 mg (milligrams) for every 20 pounds of body weight. If the patient weighs 160 pounds and he is to receive a dose of this medicine every 4 hours, find the amount of medicine he should receive in each dose.

19) The gasoline/oil ratio for a certain lawn mower is 20 to 1. If 1 gallon equals 128 fluid ounces, how many fluid ounces of oil should be mixed with 4 gallons of gasoline? Round the answer to the nearest whole ounce.

1) $\frac{13}{11}$
2) $\frac{17}{50}$
3) $\frac{1}{7}$
4) $\frac{1 \text{ car}}{7 \text{ people}}$
5) 21 mi/hr
6) True
7) False
8) 2
9) 12
10) $\frac{2}{5}$
11) 35
12) 17
13) $1\frac{2}{3}$
14) 24 free throws
15) 42 ft
16) 21 km
17) 10 bags
18) 200 mg
19) 26 fl oz