Name _____ Class _____ Date _____

Use with Section 4.4

Extra Practice

Problems and Applications

1 Evaluate each product.

a $\frac{5}{5} \cdot \frac{9}{13}$ b $\frac{5}{13} \cdot \frac{9}{5}$

c $\frac{6.5}{6.5} \cdot \frac{9}{13}$ d $\frac{9}{6.5} \cdot \frac{6.5}{13}$

1a _____

b _____

c _____

d _____

In problems 2–4, simplify each expression, being sure to include the correct units.

2 $\frac{120 \text{ dollars}}{1 \text{ hour}} \cdot \frac{1 \text{ day}}{8 \text{ hours}}$

3 $\frac{20 \text{ meters}}{1 \text{ second}} \cdot \frac{60 \text{ seconds}}{1 \text{ minute}}$

4 $\frac{60 \text{ minutes}}{1 \text{ hour}} \cdot \frac{24 \text{ hours}}{1 \text{ day}} \cdot \frac{7 \text{ days}}{1 \text{ week}}$

2 _____

3 _____

4 _____

5 An Olympic triple jumper can jump 52.8 feet. How many attempts would it take to jump a total distance of 1 mile?

6 Express 36 kilograms as a number of pounds.

7 How many quarts are in 4 gallons?

8 How many gallons are in 72 pints?

9 If a truck is 32 feet long, how many truck lengths are in one mile?

10 Kendra is 5 feet 6 inches tall, and Paul is 6 feet 2 inches tall. What is the ratio of Paul's height to Kendra's height?

5 _____

6 _____

7 _____

8 _____

9 _____

10 _____

In problems 11 and 12, simplify each expression.

11 $\frac{3 \text{ ft}}{5 \text{ sec}} \cdot \frac{60 \text{ sec}}{1 \text{ min}}$

12 $\frac{24 \text{ dollars}}{2 \text{ hours}} \cdot \frac{8 \text{ hour}}{1 \text{ workday}} \cdot \frac{5 \text{ workdays}}{1 \text{ week}}$

11 _____

12 _____

13 Deirdre earns \$4.80 per hour. She works six hours per day.

a How much does she earn in a five-day work week?

b If she worked only $3\frac{1}{2}$ hours on Friday, how much did she earn that day?

c If she earned \$144.00, how many hours did she work?

13a _____

b _____

c _____

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14 The directions on a can of powdered punch say to use $2\frac{1}{2}$ scoops of mix to make 1 quart of punch. How many scoops of mix are needed to make
- a 1 pint of punch?
- b $3\frac{1}{2}$ quarts of punch?
- c 2 gallons of punch?

14a _____
b _____
c _____

15 A person must be at least 70 centimeters tall to ride the rollercoaster at the amusement park. Can Maria, who is 3 feet 4 inches tall, ride the rollercoaster? 15 _____

16 A $\frac{3}{4}$-ton statue is being delivered to the fourth floor. The elevator, has a maximum capacity of 2500 kilograms. Could the delivery people use the elevator to bring the statue to the fourth floor? 16 _____

17 Anna can maintain an average speed of 5 miles per hour when jogging.
- a How far can she jog in 2 hours 15 minutes?
- b If she jogs 45 minutes a day, how many days will it take Anna to jog a total of 100 miles?

17a _____
b _____

◀ Spiral Learning ▶

18 Josh knows that his vehicle, including its contents, weighs 4 tons. If he comes to a bridge that has a load limit of 4000 kilograms, should he drive across the bridge? 18 _____

19 Two towns are 28 kilometers apart. A map shows a scale of 1 cm : 8 km. How far apart are the two towns on the map? 19 _____

In problems 20–23, solve each equation for x.

20 $\frac{x}{5} = \frac{6}{15}$ 21 $\frac{x}{14} = \frac{5}{2}$ 22 $\frac{3}{7} = \frac{x}{28}$ 23 $\frac{2}{5} = \frac{x}{20}$

20 _____
21 _____
22 _____
23 _____

24 If you have \$3.10, how many of each can you buy?
- a 40¢ tickets for rides
- b Greeting cards for \$1.19 each

24a _____
b _____

In problems 25 – 27, find each ratio of lengths.

25 $\frac{6 \text{ feet}}{3 \text{ yards}}$ 26 $\frac{72 \text{ inches}}{1 \text{ yard}}$ 27 $\frac{9 \text{ inches}}{4 \text{ feet}}$

25 _____
26 _____
27 _____

28 Use these three equations to find the values of x, y, and z. 28 _____

$7 + 3(5) = x$ $\quad x + 23 = y$ $\quad z = \frac{y}{3} + \frac{x}{11}$