

**Unit 5 Pretest****Multiple Choice**

Identify the choice that best completes the statement or answers the question.

- \_\_\_\_\_ 1. Which is the best buy?
- a. \$9.55 for 5 bottles of juice
  - b. \$15.36 for 8 bottles of juice
  - c. \$13.51 for 7 bottles of juice
  - d. \$7.76 for 4 bottles of juice
- \_\_\_\_\_ 2. Determine which ratio forms a proportion with  $\frac{5}{8}$  by finding a common multiplier.
- a.  $\frac{50}{16}$
  - b.  $\frac{40}{16}$
  - c.  $\frac{50}{80}$
  - d.  $\frac{10}{64}$
- \_\_\_\_\_ 3. Which ratios can form a proportion?
- a.  $\frac{9}{45}, \frac{8}{40}$
  - b.  $\frac{8}{12}, \frac{12}{21}$
  - c.  $\frac{8}{12}, \frac{12}{15}$
  - d.  $\frac{9}{22}, \frac{14}{28}$

**Short Answer**

4. While picking thirty apples, Mia noticed that six apples had worm holes and had to be thrown away. What is the ratio of good apples picked to bad apples picked?

**Write a unit rate for the situation. Round to the nearest hundredth if necessary.**

5. traveling 218 km in 4 h
6. A soccer player scored 42 goals in 89 games. Express the player's scoring rate as a unit rate rounded to the nearest thousandth.

Name: \_\_\_\_\_

ID: A

7. Drinking 8 fluid ounces of milk provides 270.0 milligrams of calcium. How many fluid ounces of milk provide 60.5 milligrams of calcium? Round to the nearest tenth.

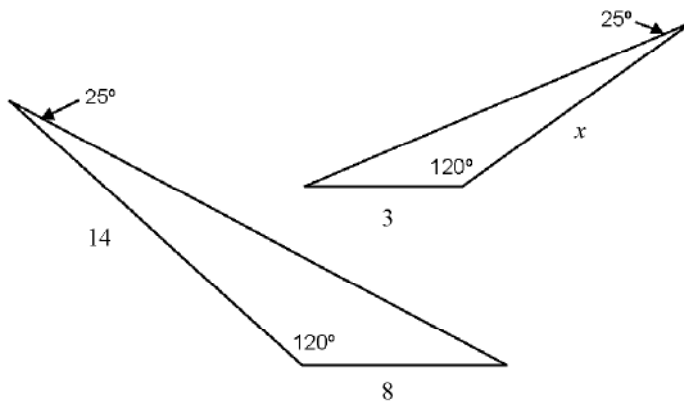
8. An astronaut who weighs 126 lb on Earth weighs only 21 lb on the moon. How much would a person who weighs 36 lb on the moon weigh on Earth?

9. Solve the proportion using mental math.

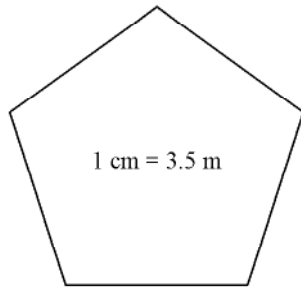
$$\frac{x}{3} = \frac{5}{15}$$

The triangles below are similar. Find the value of  $x$ .

10.



11. In the scale drawing below, each side is 1.9 cm long. Use the scale factor shown. What is the perimeter of the actual object?



12. Los Angeles is about 385 miles from San Francisco. How far apart would the cities be on a map with a scale of 1 in. = 25 mi? If necessary, round to the nearest hundredth.
13. Jake sold 54 tickets to the school fair and Jeanne sold 15 tickets. What is the ratio, in simplest form, of the number of tickets Jeanne sold to the number of tickets Jake sold?
14. During one team's season, the ratio of the number of games the team won to the number of games the team played was 4 to 9. The team played 45 games. How many games did the team win?
15. Shannon runs  $9\frac{1}{2}$  miles in  $1\frac{4}{5}$  hours. Find the unit rate.

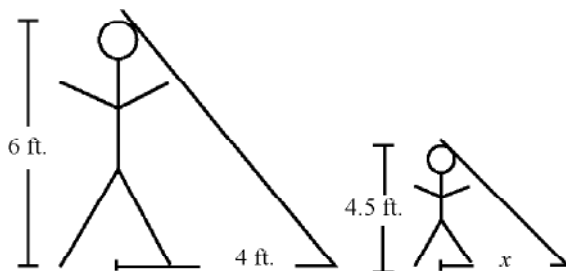
Use the unit price to find the total price.

16. If gas cost \$2.92 per gallon, then how much would 8 gallons cost?

Solve the proportion using cross products. Round to the nearest hundredth if necessary.

17.  $\frac{11 \text{ miles}}{55 \text{ hours}} = \frac{12 \text{ miles}}{h \text{ hours}}$

18. A 6-ft adult has a shadow 4 ft long. How long is the shadow of a 4.5-ft child standing next to the adult?



19. A scale model of a car is 12 in. long. The actual car is 18 ft long. What is the scale of the model?

20.

Time (min)	1	2	3	4	5
Number of words	35	72	105	140	175

- a) Is the relationship a proportional relationship? \_\_\_\_\_

Explain. \_\_\_\_\_

21.

Time(hr)	1	2	3	4	5
Biking Distance(mi.)	13	26	39	52	65

Is the relationship a proportional relationship? \_\_\_\_\_

Explain. \_\_\_\_\_

If the relationship is proportional, give the constant of proportionality. \_\_\_\_\_

Write an equation that shows the relationship. \_\_\_\_\_

22.

Time (min)	1	2	3	7	10
Water used(gal)	7	14	21	49	70

Write an equation for the relationship. \_\_\_\_\_

What does x represent? \_\_\_\_\_

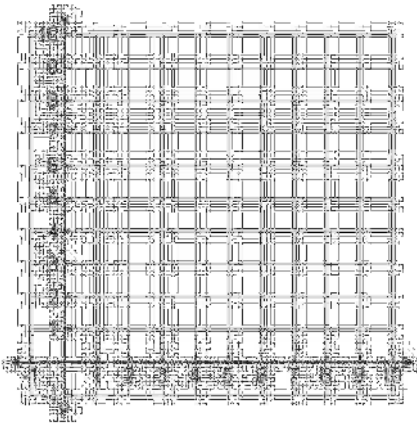
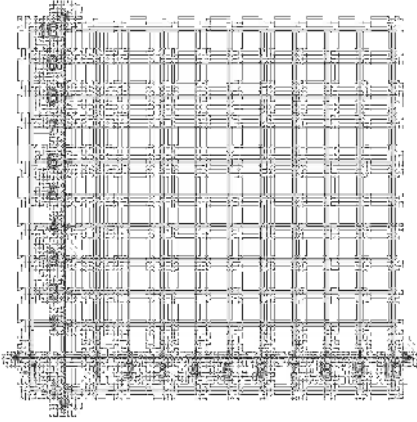
What does y represent? \_\_\_\_\_

23. Jimmy can drive 210 miles in 3 hours, 350 miles in 5 hours, 630 miles in 9 hours, and 700 miles in 10 hours.

Write an equation to show the relationship.

24. Does the graph below show a proportional relationship? \_\_\_\_\_

Explain. \_\_\_\_\_



25.

On the graph above what does the point (3,6) represent? \_\_\_\_\_

What is the constant of proportionality(unit rate)? \_\_\_\_\_

Write an equation to show the relationship. \_\_\_\_\_