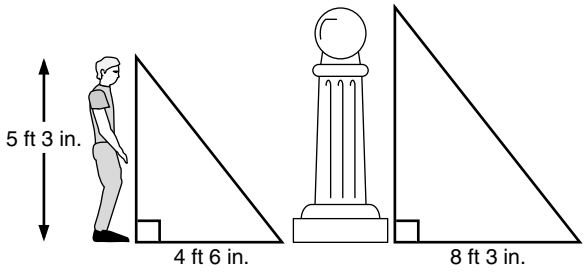
Name _____ Date _____ Class _____

LESSON 7-5

Problem Solving

Using Proportional Relationships

1. A student is standing next to a sculpture. The figure shows the shadows that they cast. What is the height of the sculpture?



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2. At the halftime show during a football game, a marching band is to form a rectangle 50 yards by 16 yards. The conductor wants to plan out the band members' positions using a 14- by 8.5-in. sheet of paper. What scale should she use to fit both dimensions of the rectangle on the page? (Use whole inches and yards.)

_____

3. An artist makes a scale drawing of a new lion enclosure at the zoo. The scale is 1 in : 25 ft. On the drawing, the length of the enclosure is $7\frac{1}{4}$ inches. What is the actual length of the lion enclosure?

_____

4. A room is 14 feet long and 11 feet wide. If you made a scale drawing of the top view of the room using the scale $\frac{1}{2}$ in $=$ 2 ft, what would be the length and width of the room in your drawing?

_____

Choose the best answer.

5. A visual-effects model maker for a movie draws a spaceship using a ratio of 1 : 24. The drawing of the spaceship is 22 inches long. What is the length of the spaceship in the movie?

A 4 ft **C** 44 ft

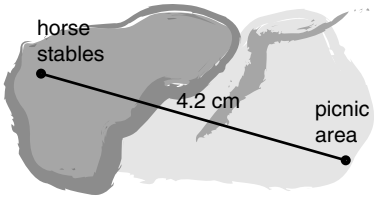
B 8 ft **D** 528 ft

6. A free-fall ride at an amusement park casts a shadow $43\frac{2}{3}$ feet long. At the same time, a 6-foot-tall person standing in line casts a shadow 2 feet long. What is the height of the ride?

F $21\frac{5}{6}$ ft **H** $98\frac{1}{4}$ ft

G $65\frac{1}{2}$ ft **J** 131 ft

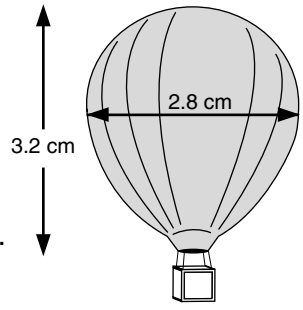
7. The scale of the park map is 1.5 cm $=$ 60 m. Which is the best estimate for the actual distance between the horse stables and the picnic area?



A 21.4 m **C** 168.0 m

B 90.0 m **D** 288.0 m

8. A hot-air balloon is 26.8 meters tall. Use the scale drawing to find the actual distance across the hot-air balloon.



F 23.45 m **H** 75.0 m

G 30.6 m **J** 85.8 m

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