

Name: _____

Unit 8 Review
Review due on Monday, February 22, 2016
Test on Tuesday, February 23, 2016

1. A polygon has a perimeter of 36 inches. Each side is exactly 6 inches long. Which of the following figures does this describe?
- a. A rectangle
 - b. A square
 - c. A regular octagon
 - d. A regular hexagon

Use the following picture for questions 2-4.

Olympic-Sized Pool

Lane 1 m	2.5
Lane 2 m	2.5
Lane 3 m	2.5
Lane 4 m	2.5
Lane 5 m	2.5
Lane 6 m	2.5
Lane 7 m	2.5
Lane 8 m	2.5

50 m

2. What is the perimeter of an Olympic-size swimming pool?
3. What is the area of the swimming pool?
4. What is the perimeter of each lane?

5. Sarah Jane wants to make a rectangular prism with a length of 6 cubes, a width of 3 cubes, and a volume of 72 cubic units. How many layers of the base does she need?

6. Landon used unit cubes to build a rectangular prism with a length of 4 cubes, a width of 3 cubes, and a height of 5 cubes. John built a rectangular prism with a length of 3 cubes, a width of 3 cubes, and a height of 6 cubes. Who used more cubes? **Explain** your reasoning.

7. Which expression can be used to find the volume of this box?



- a. $(6 \times 4) \times 3$
- b. $(6 \times 4) + 3$
- c. 6×4
- d. $2 \times (6 \times 4 \times 2)$

8. How can you convert inches to yards? Would you multiply or divide when converting? Explain your reasoning?

9. Anna is putting carpet in a room that is 12 feet long and 10 feet wide. The carpet costs \$3.00 per square foot. How much will the carpet for the room cost?

10. Michelle bought 5 pounds of potting soil. She wants to put 10 ounces of soil in each of her flower pots. How many flower pots can she fill?

11. A wooden block measures 5 centimeters long, 3 centimeters wide, and 2 centimeters tall. Draw a rectangular prism to show the block and label it. What is the volume of the block?

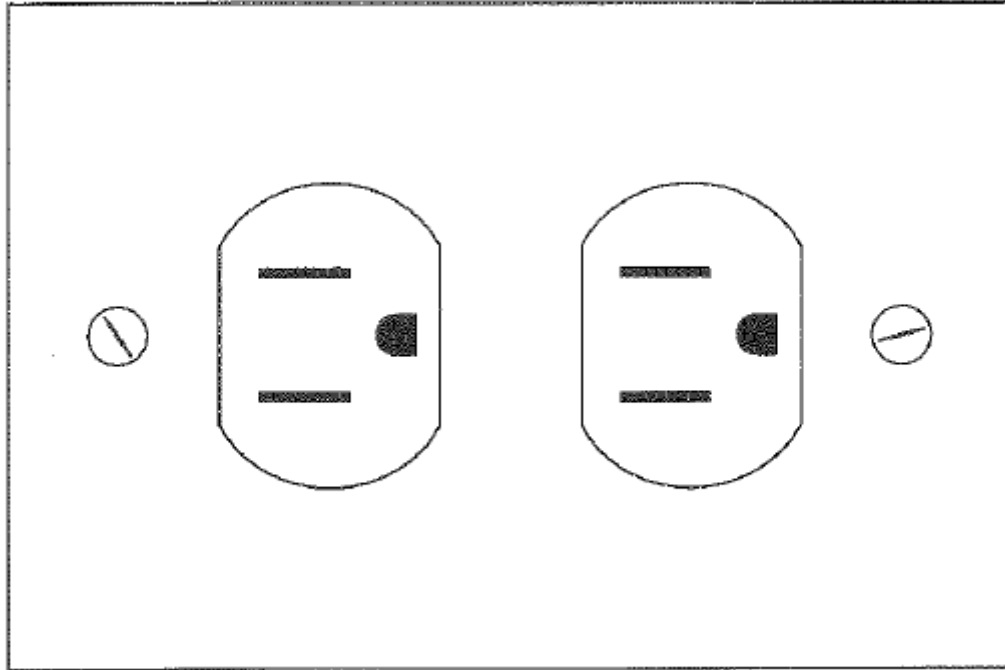
12. A coffeemaker at a restaurant can brew 42 cups. How many pints can this coffeemaker brew?

- a. 84 pints
- b. 21 pints
- c. 336 pints
- d. 420 pints

13. During a science experiment, students were asked to compare different masses. Which comparison is NOT true?

- a. $100 \text{ mg} < 10 \text{ g}$
- b. $2,000 \text{ kg} > 2,000 \text{ g}$
- c. $1,000,500 \text{ mg} > 1 \text{ kg}$
- d. $600 \text{ g} > 6 \text{ kg}$

14. Kacey bought a rectangular wall plate for an electrical outlet. A picture of the wall plate is shown below. Use the ruler provided to measure the dimensions of the wall plate to the nearest centimeter.



Which measurement is closest to the perimeter, in centimeters, of the wall plate?

- a. 44 cm
- b. 96 cm
- c. 40 cm
- d. 20 cm

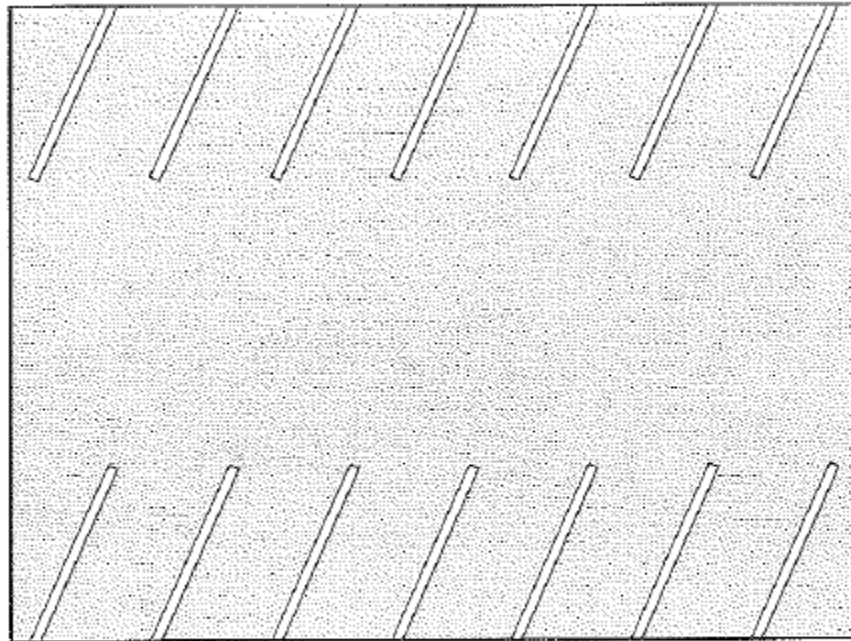
15. The masses of two gorillas are given below.

- A female gorilla has a mass of 85,000 grams.
- A male gorilla has a mass of 220 kilograms.

What is the difference between these two masses in grams?

- a. 135,000 g
- b. 84,780 g
- c. 63,000 g
- d. 305,000 g

16. A rectangular parking lot is represented by the scale drawing below. Use the ruler provided to measure the length and width of the rectangle to the nearest inch.



SCALE
1 inch represents 20 feet.

Which measurement is closest to the area, in square feet, of the actual parking lot?

- a. 8,000 square feet
- b. 360 square feet
- c. 4,800 square feet
- d. 280 square feet

17. A water dispenser contains 512 fluid ounces of water. What is the total number of 8-fluid-ounce cups of water that can be filled from the dispenser?

- a. 611
- b. 64
- c. 4,096
- d. 61

18. The side length of a square is 20 millimeters. Which statement about this square is true?
- a. The perimeter of the square is 400 millimeters, because $20 \times 20 = 400$.
 - b. The perimeter of the square is 80 millimeters, because $20 \times 4 = 80$.
 - c. The area of the square is 40 square millimeters, because $20 \times 2 = 40$.
 - d. The area of the square is 80 square millimeters, because $20 \times 4 = 80$.
19. A conference center has 12 rooms that each have a floor area of 875 square feet and 6 rooms that each have a floor area of 950 square feet. What is the total floor area, in square feet, of these rooms?
- a. 10,500 square feet
 - b. 8,325 square feet
 - c. 16,200 square feet
 - d. 15,900 square feet
20. Kyle's baseball bat has a length of 100 centimeters. Which of the following is true?
- a. $100 \text{ cm} < 500 \text{ mm}$
 - b. $100 \text{ cm} > 3 \text{ m}$
 - c. $100 \text{ cm} > 1 \text{ km}$
 - d. $100 \text{ cm} = 1 \text{ m}$
21. The base of a rectangular prism has a length of 15 inches and a width of 13 inches. What is the area of this base of the prism in square inches?

22. The living room in the house has an area of 224 square feet and a width of 14 feet. What is the length of the room?

23. What is the height of a rectangular prism that has a volume of 280 cubic meters, a length of 8 meters, and a width of 7 meters? Show how you found your answer.

24. The length of a rectangular garden is 10 yards and its width is 10 feet. What is the perimeter of the garden in feet?

25. A cereal box measures 6 inches long, 2 inches wide, and 10 inches tall. The area of the base is 12 square inches. Draw and label a rectangular prism to represent the box. What is the volume of the figure you drew?

26. You are filling a 2-liter bottle with liquid from full 80-milliliter containers. How many containers will it take to fill the 2-liter bottle?

- a. 400
- b. 250
- c. 40
- d. 25

27. What is the height of a rectangular prism that has a volume of 192 cubic feet and a base with an area of 48 square feet? Show your work.

28. The New York City Marathon is 26 miles 385 yards long. How long is it in feet?