

TEST NAME: **7G146-1 Edwards**
TEST ID: **1709099**
GRADE: **07 - Seventh Grade**
SUBJECT: **Mathematics**
TEST CATEGORY: **My Classroom**

Student: _____

Class: _____

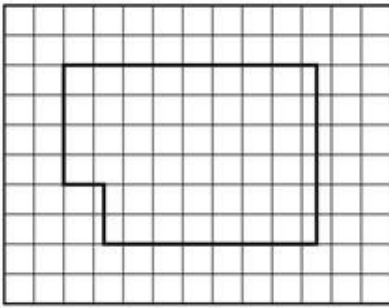
Date: _____

1. **The students in a class are building a rectangular float for a homecoming parade. The float will be 6 feet wide by 10 feet long. The students made a scale drawing of the float that is 14 inches long. What is the approximate width of the scale drawing of the float?**
 - A. 8.4 inches
 - B. 10.0 inches
 - C. 18.0 inches
 - D. 23.3 inches

2. A room on a scale drawing has the dimensions 8 cm by 12 cm. The scale of the drawing is 2 cm = 3 ft. What are the actual dimensions of the room?
 - A. 5 ft by 8 ft
 - B. 12 ft by 18 ft
 - C. 24 ft by 36 ft

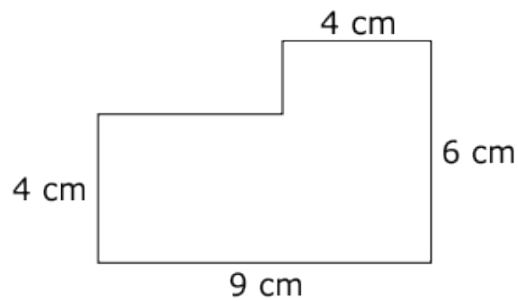
3. The actual distance between Mike's house and John's house is 28 km. On a map, the distance between the two houses is 3.5 cm. What is the scale used on this map?
 - A. 2 cm = 7 km
 - B. 2 cm = 5 km
 - C. 1 km = 8 cm
 - D. 1 cm = 8 km

4. Monty made a scale drawing of his room on grid paper, as shown below.



If each square on the grid paper represents a side length of 2 feet, what is the length, in feet, of the longest wall in the room?

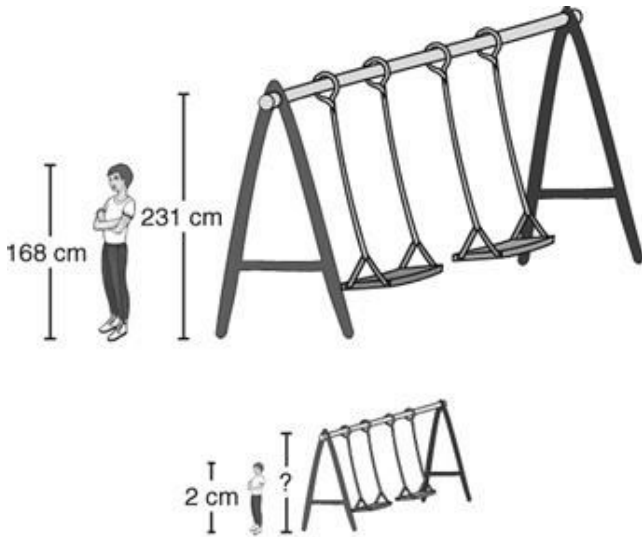
- A. 12
 - B. 14
 - C. 17
 - D. 22
5. A scale drawing of a building is shown below. The scale of the drawing is 1 cm = 5 m.



What is the perimeter of the actual building?

- A. 150 m
- B. 115 m
- C. 30 m
- D. 23 m

6. Ming is making a model display of a playground.

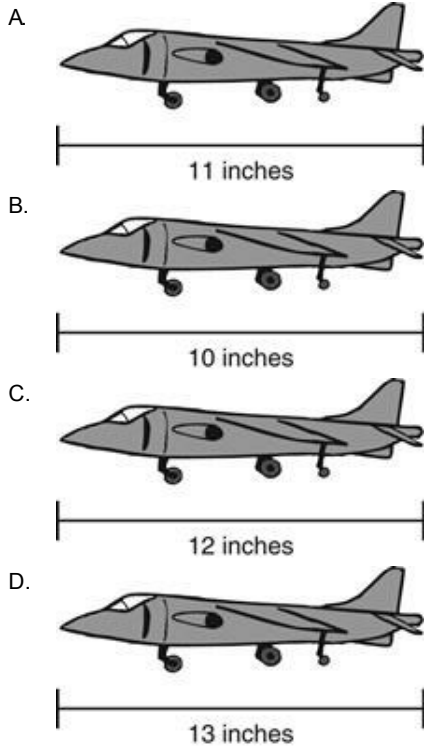


Note: Figures are not drawn to scale.

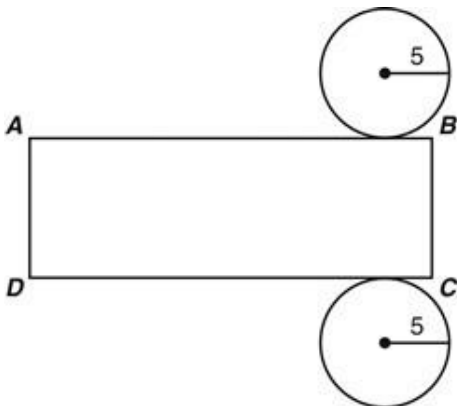
A 168-cm tall person is 2 cm in Ming's model. How high should his model swing be if the actual swing is 231 cm high?

- A. 2.91 cm
- B. 2.75 cm
- C. 2.63 cm
- D. 1.45 cm

7. A jet has a length of 242 feet. Which picture shows a model of the jet built to a scale of 1 inch = 22 feet?



8. Each side of a large hexagonal dog park is 2 times as long as the corresponding side of a similar dog park. The distance around the small dog park is 800 feet. What is the distance around the large dog park, in feet?
- A. 1600
 B. 2400
 C. 3200
 D. 4800
9. A wheel has a radius of 4.5 in. What is the **approximate** circumference of the wheel?
- A. 14 in.
 B. 28 in.
 C. 64 in.
10. The circumference of a circle is 31 cm. **About** how long is the radius of the circle?
- A. 5 cm
 B. 10 cm
 C. 16 cm
 D. 20 cm
11. The net below is used to form a cylinder with a radius of 5 units.



What is the length of \overline{CD} ?

- A. 10 units
 B. 25 units
 C. 10π units
 D. 25π units

12. The diameter of a circle is 7 centimeters. What is the circumference of the circle in centimeters?

- A. 7π
- B. 14π
- C. 49π
- D. 196π

13. The side view of a tractor is shown below.



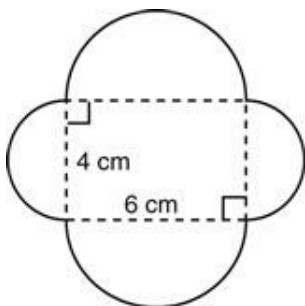
Radius = 16 inches

Radius = 24 inches

Which statement describes the relationship between the circumferences of the wheels of the tractor?

- A. The circumference of the larger wheel is 1.5 times the circumference of the smaller wheel.
- B. The circumference of the larger wheel is 3.14 times the circumference of the smaller wheel.
- C. The circumference of the larger wheel is 8 times the circumference of the smaller wheel.
- D. The circumference of the larger wheel is 16 times the circumference of the smaller wheel.

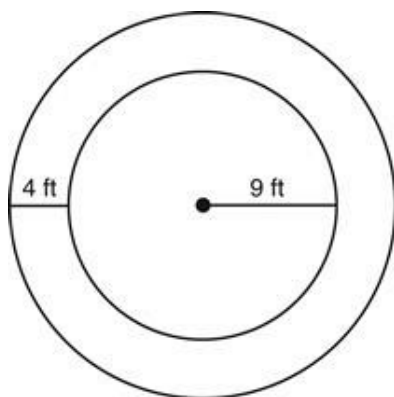
14. The figure consists of a rectangle and semicircles.



What is the area, in square centimeters, of the figure?

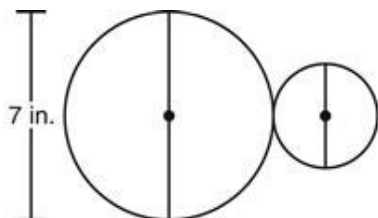
- A. 13π
- B. $24 + 6.5\pi$
- C. $24 + 13\pi$
- D. $24 + 52\pi$

15. Raymond has a circular garden with a radius of 9 feet. He wants to build a walkway that is 4 feet wide around the garden.



What will the area of the walkway be in square feet?

- A. 16π
B. 25π
C. 81π
D. 88π
16. Two gears are shown below. The diameter of the larger gear is twice as large as the diameter of the smaller gear.



What is the circumference, in inches, of the smaller gear?

- A. 14π
B. 7π
C. 3.5π
D. 1.75π
17. The diameter of a circle is 8 cm. What is the **approximate** area of the circle?
- A. 25 cm^2
B. 50 cm^2
C. 201 cm^2

18. The table below gives the side lengths and surface areas of different cubes.

Cubes

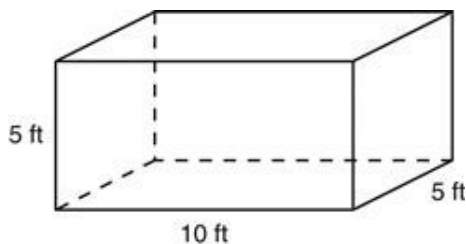
Side Length (cm)	Surface Area (cm ²)
1	6
2	24
3	54
4	96

Which conclusion can be drawn from the table?

- A. If the side length doubles, the surface area is cubed.
 - B. If the side length doubles, the surface area is squared.
 - C. If the side length doubles, the surface area also doubles.
 - D. If the side length doubles, the surface area is quadrupled.
19. Amanda wants to buy a fish aquarium for her bedroom. Since she plans to place the fish aquarium on her desk, she wants to purchase an aquarium with the least possible volume. Amanda plans to have 4 fish and each fish requires approximately 7 gallons of water. Which set of dimensions has the least volume that could hold Amanda's fish? (There are approximately 231 cubic inches in 1 gallon of water.)

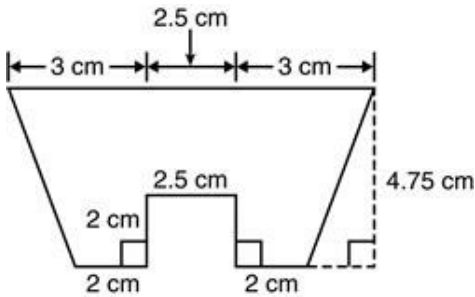
- A. $20\frac{1}{2}$ inches \times $10\frac{1}{2}$ inches \times $18\frac{3}{4}$ inches
- B. $20\frac{1}{2}$ inches \times $10\frac{1}{2}$ inches \times $23\frac{3}{4}$ inches
- C. $30\frac{1}{4}$ inches \times $12\frac{1}{2}$ inches \times $12\frac{3}{4}$ inches
- D. $30\frac{1}{4}$ inches \times $12\frac{1}{2}$ inches \times $18\frac{3}{4}$ inches

20. What is the surface area of the following figure?



- A. 250 square feet
- B. 150 square feet
- C. 100 square feet
- D. 50 square feet

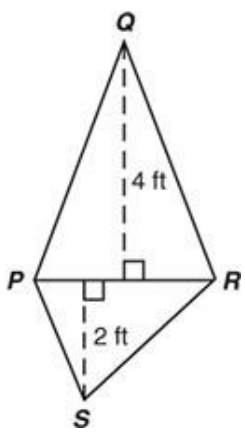
21. Zachary wants to build a tunnel for his model railroad. He drew the design below for the tunnel entrance.



What is the area of the design?

- A. 18.75 square centimeters
- B. 23.75 square centimeters
- C. 30.625 square centimeters
- D. 40.375 square centimeters

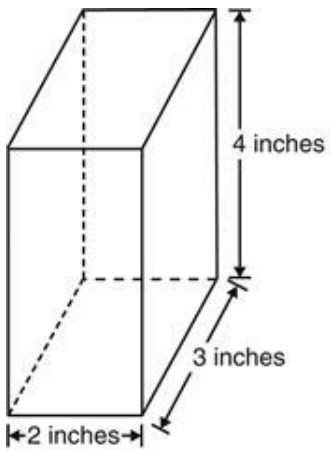
22. The area of $\triangle PSR$ is 5 ft^2 .



What is the area of $\triangle PQR$?

- A. 6 ft^2
 - B. 7 ft^2
 - C. 10 ft^2
 - D. 12 ft^2
23. A rectangular box needs to be able to hold exactly 288 cubic centimeters of sand. If its base is 48 square centimeters, then what could its dimensions be?
- A. 6 cm by 8 cm by 7 cm
 - B. 4 cm by 12 cm by 6 cm
 - C. 3 cm by 16 cm by 8 cm
 - D. 2 cm by 24 cm by 5 cm

24. A rectangular prism is shown below.



If all the dimensions of the prism are tripled, what effect will this have on its total surface area?

- A. The surface area will be 3 times as great.
- B. The surface area will be 6 times as great.
- C. The surface area will be 9 times as great.
- D. The surface area will be 12 times as great.