

# Grade 8 measurement test

|      |      |           |
|------|------|-----------|
| NAME | DATE | SCORE / 8 |
|------|------|-----------|

Answer each question. Show your work.

- 1 A car travels at 20 meters per second. What is this speed in kilometers per hour?

- 2 The volume of a cylinder with radius 4 and height 7 is  $\pi$  cubic units. What number goes in the box?

- 3 Maya measures the length of a table and gets 75 cm, to the nearest centimeter. The true length is L cm. Which inequality shows every value L could have?

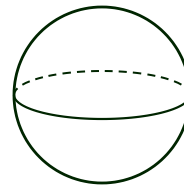
- ☐  $74.5 \leq L < 75.5$ 
☐  $75 \leq L < 76$   
☐  $74.5 \leq L < 75$ 
☐  $74 \leq L < 76$

- 4 A town has 3,200 people living on 16 square kilometers of land. What is the population density of the town?

- ☐ 200 people per square kilometer  
☐ 200 square kilometers per person  
☐ 0.005 people per square kilometer

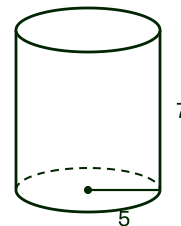
- 5 A toy rocket is a cylinder with a cone on top. Both parts have a radius of 3 centimeters. The cylinder is 8 centimeters tall and the cone is 6 centimeters tall. The volume of the rocket is  $\pi$  cubic centimeters. What number goes in the box?

- 6 A ball has a radius of 6 centimeters. Use 3.14 for  $\pi$ . What is the volume, in cubic centimeters, of the ball?




- 7 A pyramid has a rectangular base 3 meters by 5 meters. The height of the pyramid is 3 meters. What is the volume, in cubic meters, of the pyramid?

- 8 The cylinder below is measured in centimeters. Its total surface area is  $\pi$  square centimeters. What number goes in the box?



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|   |                                 |   |     |   |                      |
|---|---------------------------------|---|-----|---|----------------------|
| 1 | 72                              | 2 | 112 | 3 | $74.5 \leq L < 75.5$ |
| 4 | 200 people per square kilometer | 5 | 90  | 6 | 904.32               |
| 7 | 15                              | 8 | 120 |   |                      |