

Name: _____

Assignment: Math 8 Volume Checkpoint - Day 6

Class/Period: _____

Teacher: Zigrossi

- 1 The volume, V , of any cube with a side length, s , can be determined using the formula $V = s^3$. What is the volume, in cubic centimeters, of a cube with a side length of 2.3 centimeters?

- 1 5.29
- 2 6.9
- 3 8.027
- 4 12.167

- 2 What is the volume of a hemisphere that has a diameter of 12.6 cm, to the *nearest tenth of a cubic centimeter*?

- 1 523.7
- 2 1047.4
- 3 4189.6
- 4 8379.2

- 3 A cylinder has a circular base with a radius of 3 units and a height of 7 units. What is the volume of the cylinder in cubic units?

- 1 2π
- 2 42π
- 3 63π
- 4 147π

- 4 The diameter of a sphere is 6 cm. What is the volume of the sphere?

(NOTE: $V = \frac{4}{3}\pi r^3$)

- 1 8π cubic centimeters
- 2 36π cubic centimeters
- 3 144π cubic centimeters
- 4 288π cubic centimeters

- 5 Two solids are described in the list below.

- One solid is a sphere and has a radius of 6 inches.
- The other solid is a cylinder with a radius of 6 inches and a height of 6 inches.

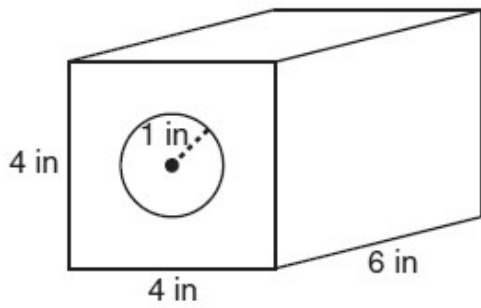
What is the difference between the volumes, in cubic inches, of the solids in terms of π ?

- 1 72π
- 2 144π
- 3 216π
- 4 288π

- 6 Alexis has a cylindrical trash can with a diameter of 24 cm and a height of 42 cm. What is the approximate volume of the can?

- 1 $1,008 \text{ cm}^3$
- 2 $3,167 \text{ cm}^3$
- 3 $19,000 \text{ cm}^3$
- 4 $76,000 \text{ cm}^3$

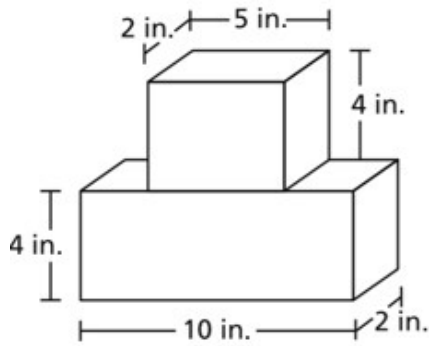
- 7 A solid metal prism has a rectangular base with sides of 4 inches and 6 inches, and a height of 4 inches. A hole in the shape of a cylinder, with a radius of 1 inch, is drilled through the entire length of the rectangular prism.



What is the approximate volume of the remaining solid, in cubic inches?

- 1 19
- 2 77
- 3 93
- 4 96

- 8 Lana used the two blocks pictured in the diagram to build a tower.

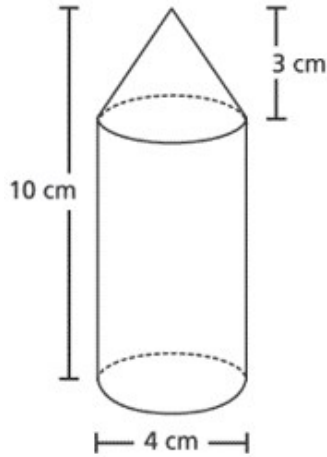


LANA'S TOWER

What is the total volume, in cubic inches, of the tower Lana built?

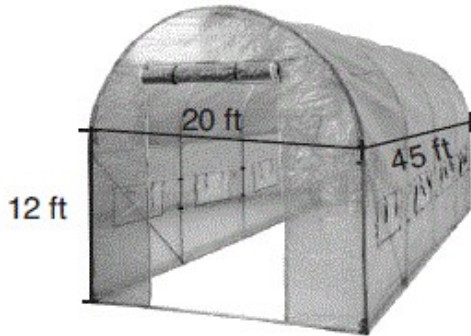
- 1 27
- 2 80
- 3 116
- 4 120

- 9 The object below was made by placing a cone on top of a cylinder. The base of the cone is congruent to the base of the cylinder.



What is the volume, in cubic centimeters, of the object?

- 1 32π
 - 2 40π
 - 3 44π
 - 4 128π
- 10 The greenhouse pictured below can be modeled as a rectangular prism with a half-cylinder on top. The rectangular prism is 20 feet wide, 12 feet high, and 45 feet long. The half-cylinder has a diameter of 20 feet.



To the nearest cubic foot, what is the volume of the greenhouse?

- 1 17,869
- 2 24,937
- 3 39,074
- 4 67,349