1) A cylinder is cut as shown. What shape will the cross-section be?

2) Circle all of the nets that will make a cube.

3) A pyramid is cut by a plane perpendicular to the base, but not passing through the vertex. What shape will the cross-section be?

4) A rectangular prism is cut by a plane perpendicular to the base. What shape is formed by the intersection?

5) If the length and width of a rectangle double, what will happen to the area?

A. The area will be 2 times the original area.

B. The area will be 3 times the original area.

C. The area will be 4 times the original area.

D. There will be no change in the area.

6) What is the volume of the triangular prism?

10 cm

12 cm

6 cm

5 cm

8 cm

7) What is the volume of the composite figure?

6 ft

8 ft

5 ft

3 ft

A. 165 ft3

B. 1,728 ft3

C. 729 ft3

D. 210 ft3

8) Denzel painted a red box Carolina blue. What is the total area he needed to paint to cover the entire box blue?

10 cm.

15 cm.

10 cm.

A. 400 cm2

B. 800 cm2

C. 650 cm2

D. 1,500 cm2

9) Two paper circles and a paper rectangle are taped together to make the figure shown. What solid could be formed by folding the paper figure?

10) What is the surface area of the cylinder?

6 cm

3 cm

11) If the volume of the cone is 96π cubic units, what is the height of the cone?

*h*

*6*

A. 6 units

B. 7 units

C. 8 units

D. 9 units

12) A cylinder has the dimensions marked in the diagram. Which statement about the volume of the cylinder is *most* accurate?

2 cm

4 cm

A. The volume is approximately 40 cm3

B. The volume is exactly 40 cm3

C. The volume is approximately 50 cm3

D. The volume is exactly 50 cm3

13) What is the volume of the cylinder?

B = 28.26 in2

10 in

14) The sphere is being filled with air. What is the approximate volume of the air if the sphere is only one quarter full?

5 in

15) Two cans of popcorn have identical heights, but the larger can has a radius that is twice as long as the smaller can. How do the volumes of the 2 cans differ?

12 in

6 in

A. The volume of the smaller can is ¼

the volume of the larger.

B. The volume of the larger can is twice the volume of the smaller.

C. The volume of the smaller can is ½

the volume of the larger.

D. The volume of the larger can is 3 times the volume of the smaller.

16) Sarah collects glass beads. She keeps her beads in an old tin can. The can is a cylinder with a diameter of 6 inches and a height of 8 inches.

If 1 cubic inch holds 4 beads, *approximately* how many beads can the tin can hold?

17) How does the volume of a cylinder compare with the volume of a cone, if they have the same radius and height?

18) How much paper would be needed to make a label to go around the can below?

9 cm

8 cm

19) Ashley covered the triangular prism box below with sticky backed decorating paper. The paper cost $0.04 per square inch. How much money will Ashley have to spend on paper?

6 in

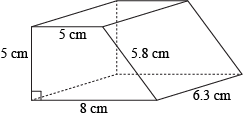
4 in

8 in

7 in

12 in

1. Dimension Changes:
   1. What does changing one dimension do to a rectangle’s area?
   2. What does changing two dimensions do to a rectangle’s area?
   3. If the height of a triangle is 15 cm and the base is 20 cm, what would the new dimensions be if the area quadrupled?
   4. Which pizza is a better deal? 16 in. for $24.95 or 8 in. for $5.95. Explain your reasoning using area, dimension changing rules, or unit rate.
2. What is the diameter of a sphere that has a volume of 11497.36 in³?
3. What is the surface area and volume of the figure?



Surface Area = Volume =

1. If x = 18 cm, what is the area of the shaded portion?

