Name _____                          Date _____

Lesson 5: Three-Dimensional Objects

## *Nets*

**Directions: Circle the net that can be folded into the three-dimensional object.**
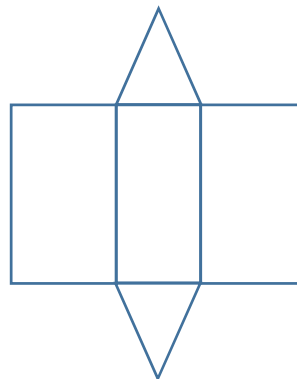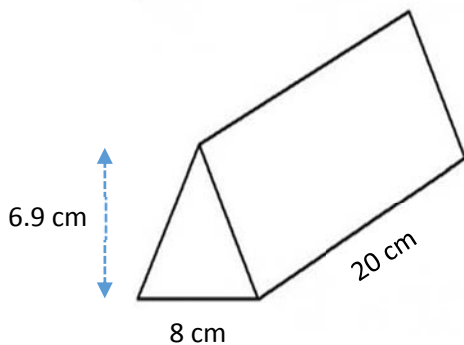
| 1) | 2) | 3) |
|----|----|----|

## *Surface Area Triangular Prism*

**4)** A triangular prism with faces that are equilateral triangles is shown below. The net of this triangular prism is also shown.
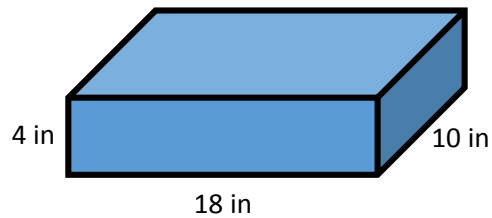
6.9 cm

20 cm

8 cm

Find the surface area of the triangular prism.

## Surface Area Triangular Prism

Video Help: https://learnzillion.com/lessons/1222-find-surface-area-of-rectangular-prisms

**5)** Draw the net of the rectangular prism shown below.
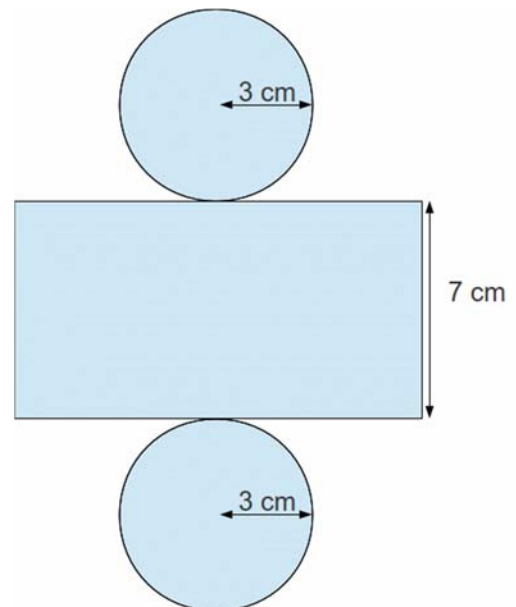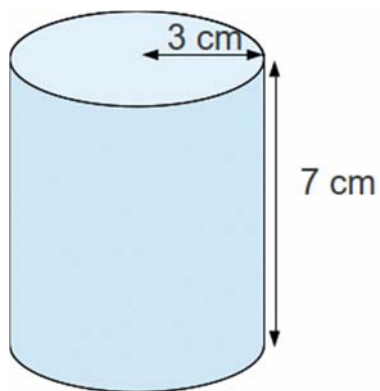


4 in

10 in

18 in

Find the surface area of the rectangular prism.

## Surface Area Cylinder

Video Help: https://www.khanacademy.org/math/basic-geo/basic-geo-volume-surface-area/basic-geo-volumes/v/cylinder-volume-and-surface-area

**6)** A cylinder and it's net is shown below.
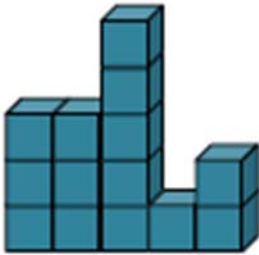


3 cm

7 cm

3 cm

7 cm

3 cm

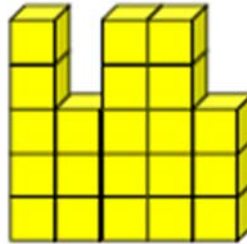Find the surface area of the cylinder in terms of π.

## *Volume*

Video Help: https://learnzillion.com/lessons/1803-use-multiplication-v-l-x-w-x-h-to-find-the-volume-of-a-solid-figure

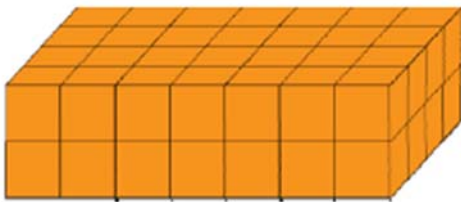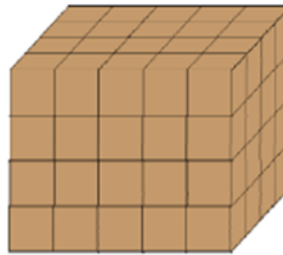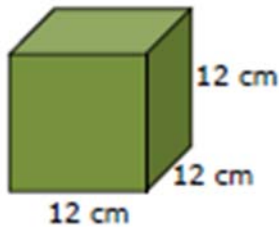***Directions: Find the volume of the following:***

7)

_____

8)

_____

9)

_____

10

_____

11)

12 cm

12 cm

12 cm

_____

12)

2 cm

5 cm

7 cm

_____

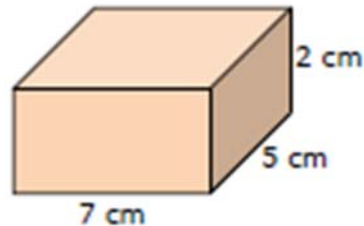**13)** We are trying to determine the size air conditioning unit we will need to cool a classroom. The size of the air conditioner depends on the volume of the classroom. The classroom has a length of 19 meters, a width of 26 meters, and a height of 30 meters. What is the volume of the classroom?
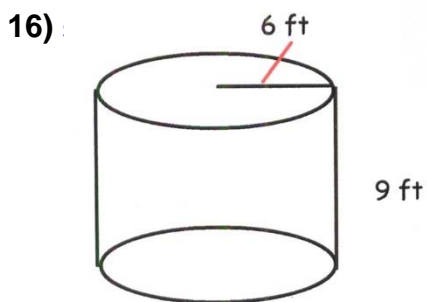
_____

**14)** Robert has a cell phone box. The box is 19 inches long by 11 inches wide by 9 inches high. What is the volume of the box?
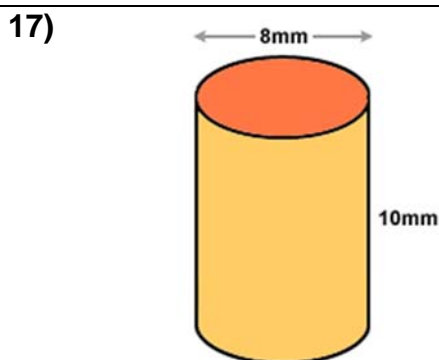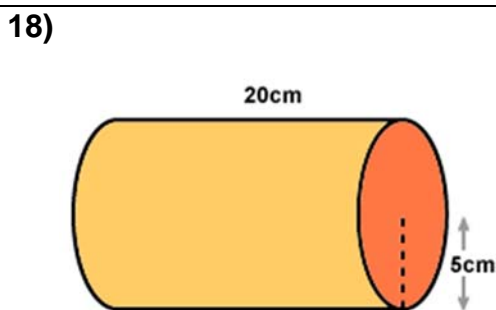
_____

## Volume of Cylinders

Video Help:

**Directions: Find the volume of the following cylinders in terms of π:**

**15)**  10 cm

30 cm

_____

**16)**  6 ft

9 ft

_____

**17)**  ←— 8mm —→

10mm

_____

**18)**  20cm

5cm

_____
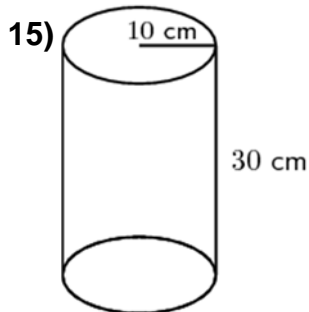
**19)** What is the volume of a regular cylinder whose base has a radius of 14 cm and has a height of 6 cm?

_____

**20)** Tennis balls are sold in aluminum cans that measure 10 inches in height and 3 inches in diameter. What is the volume of the container?

_____

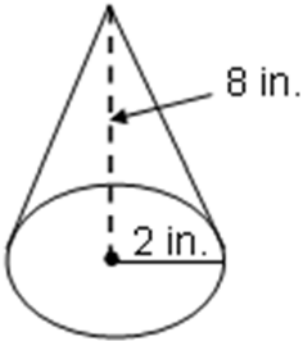**21)** A glass has a diameter of 8 cm and a height of 14 cm. What volume of water will it take to fill in the glass?

_____

## *Volume of Cones*
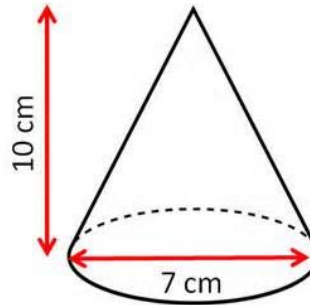
Video Help: https://learnzillion.com/lessons/1358-develop-and-apply-the-formula-for-volume-of-a-cone

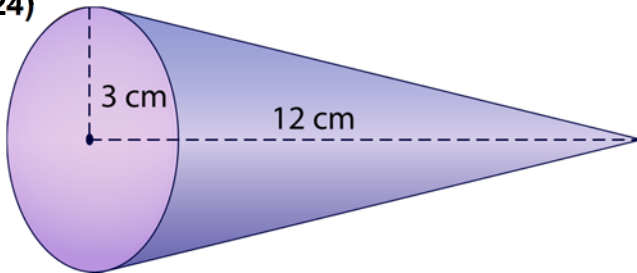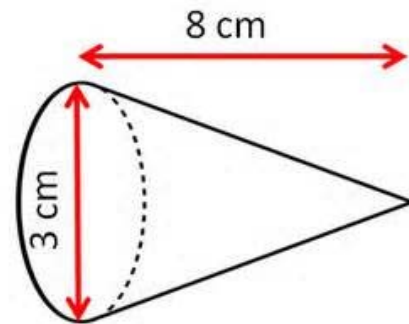*Directions: Find the volume of the following cones in terms of π:*

**22)**

8 in.

2 in.

_____

**23)**

10 cm

7 cm

_____

**24)**

3 cm

12 cm

_____

**25)**

8 cm

3 cm

_____

**26)** A cone shaped cap has a radius of 7 in and a height of 17 in. Find the volume of the cap.
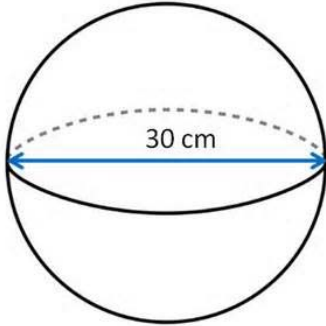
_____

**27)** An ice cream package is cone shaped. It has a radius of 5.5 cm and a height of 17 cm. Find the volume of the ice cream cone.
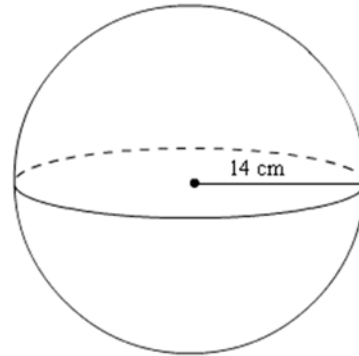
_____

## Volume of Spheres

***Directions: Find the volume of the following sphere in terms of π:***

**28)**

30 cm

_____

**29)**

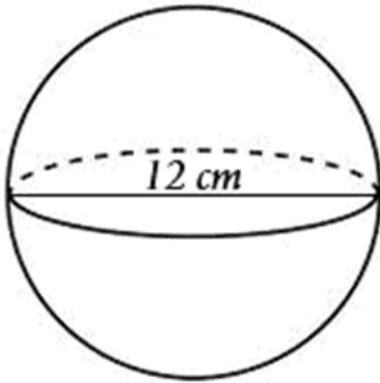14 cm

_____
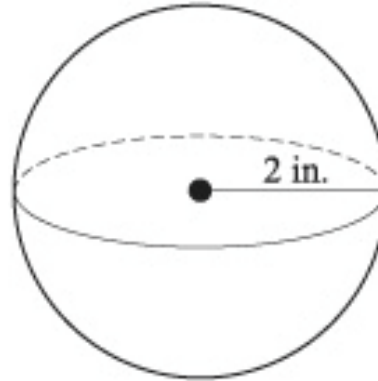
**30)**

12 cm

_____

**31)**

2 in.

_____

**32)** Michelle has a globe. The globe has a diameter of 18 cm. Find the volume of the globe.

_____

**33)** Estimate the volume of air in a beach ball that has a 15 inch diameter. Round your answer to the nearest whole number.

_____