

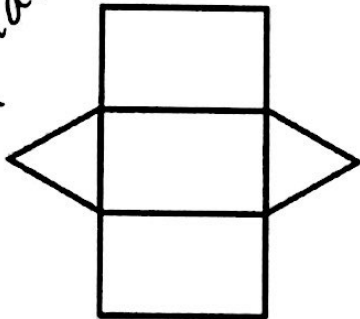
Unit 3 Review - Modeling With Geometry

NAME _____

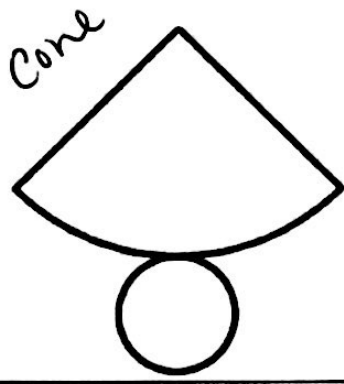
Shapes and Nets

Determine the 3D figure formed by the net.

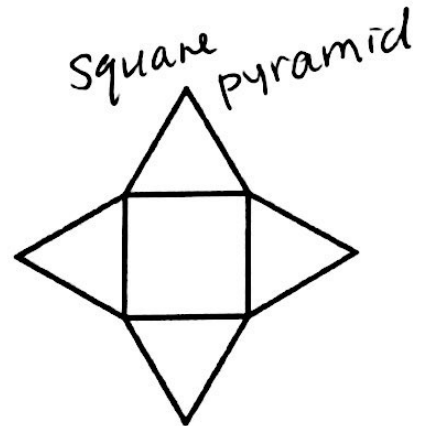
1. *Triangular Prism*



2.



3.

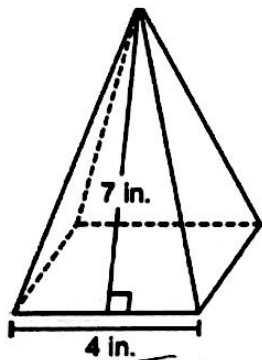


Surface Area and Volume

Surface area units²

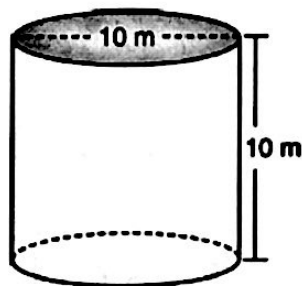
Determine the surface area of each figure.

4.



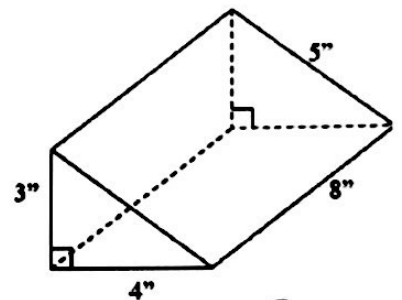
72 in^2

5.



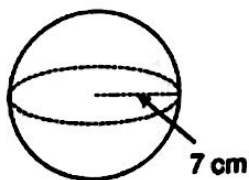
471.24 m^2

6.



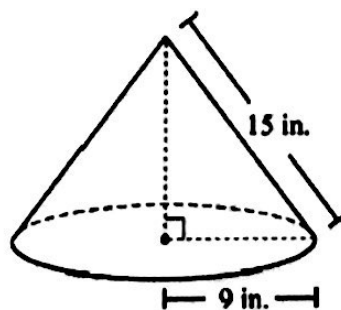
108 in^2

7.



615.75 cm^2

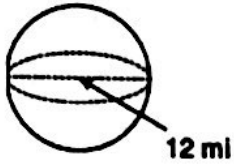
8.



678.58 in^2

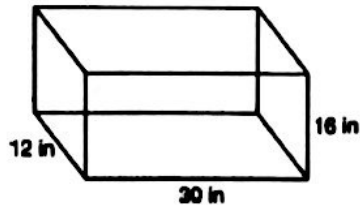
Determine the volume of each figure.

9.



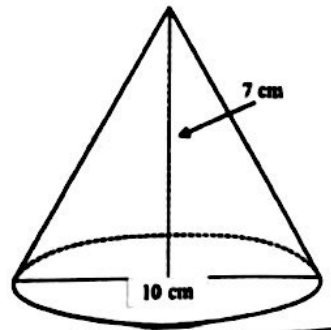
$$904.78 \text{ mi}^3$$

10.



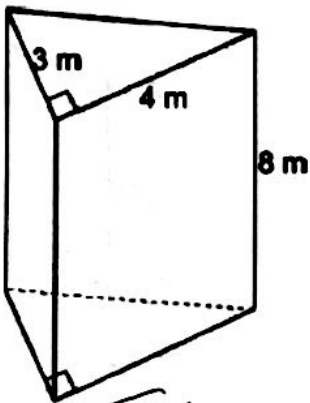
$$5760 \text{ in}^3$$

11.



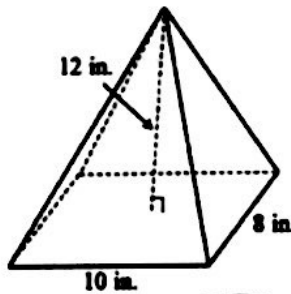
$$183.26 \text{ cm}^3$$

12.



$$48 \text{ m}^3$$

13.

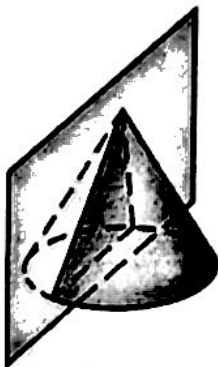


$$320 \text{ in}^3$$

Cross-Sections

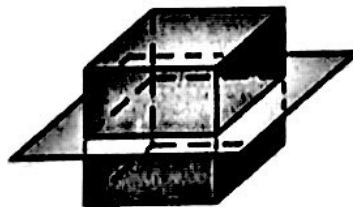
Describe the cross-section formed by the 3D figure and the plane.

14.



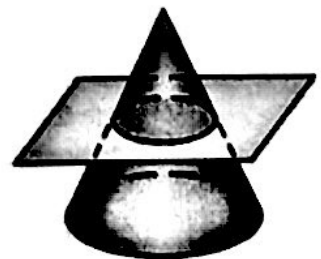
Triangle

15.



square

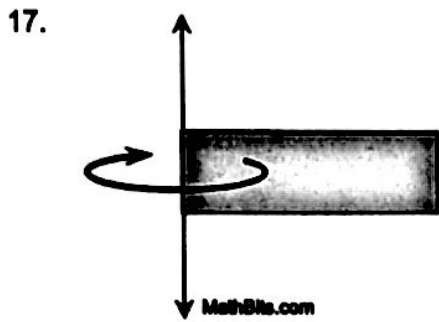
16.



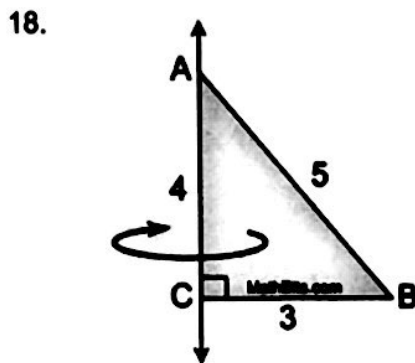
circle

Rotations of 2D Figures to Create 3D Figures

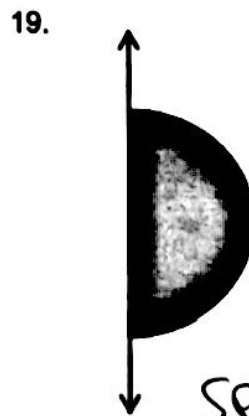
Describe the 3D figure created by rotating the 2D figure around the given line.



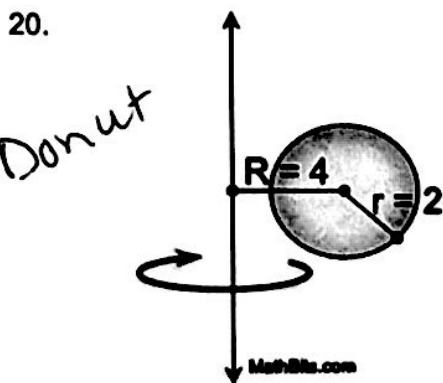
Cylinder



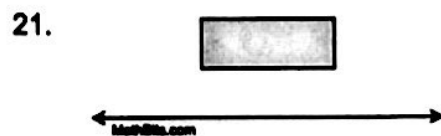
Cone



Sphere



Donut



Cylinder with cylinder hole

Geometric Modeling

22. Determine the surface area of the cover of a textbook that has a length of 11 inches, a width of 8 inches, and a height of 3 inches.

Think about where you would cover your book! 209 in²

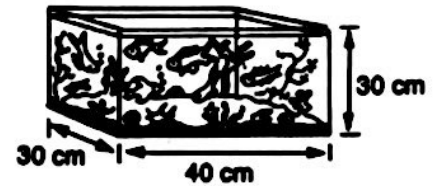
23. Judy has a cylindrical jar with a radius of 6 cm and a height of 10 cm. She puts 20 spherical marbles, each with a radius of 2 cm, into the jar. The rest of the space in the jar is filled with sand. Determine the volume of the sand.

460.77 cm³

24. Brittany is going to cover the label on a Pringles can and decorate it for Easter. The can has a diameter of 4.5 in. and a height of 14 in. She only needs to cover the label, not the top or bottom of the can, what is the minimum amount of paper needed?

$$197.92 \text{ in}^2$$

25. If one guppy requires 5 liters of water to live happily, what is the maximum number of guppies that should be kept in this aquarium?
(1000 cm³ = 1 liter)



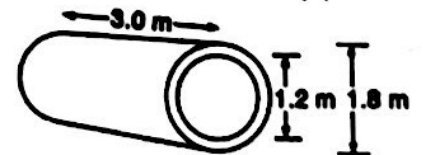
7 guppies

26. Pedro created a cone-shaped cup out of paper. If his cup has a radius of 3 inches and a slant height of 5 inches, how much paper did he use?

Think about a cup!

$$47.12 \text{ in}^2$$

27. A section of concrete pipe 30 m long has an inside diameter of 1.2 m and an outside diameter of 1.8 m. What is the volume of concrete in this section of pipe?



$$4.24 \text{ m}^3$$