

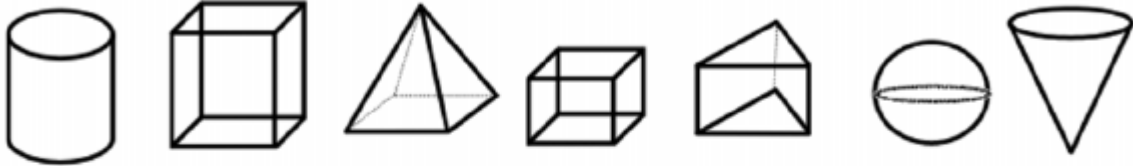
# Unit 1 - Lesson 8

## Volume of Sphere

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### A – Prisms

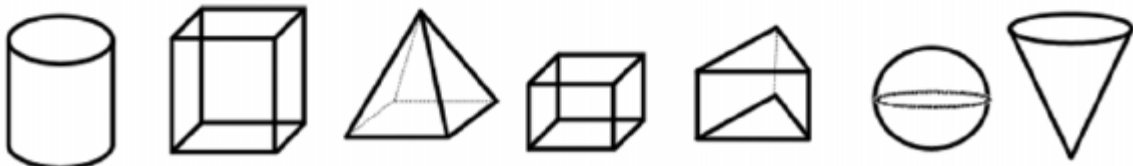
Circle the shapes that are prisms.



Volume of a prism = area of \_\_\_\_\_ × \_\_\_\_\_.

### B – Pyramids

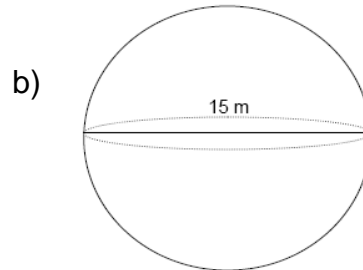
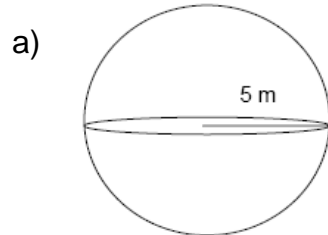
Circle the shapes that are pyramids.



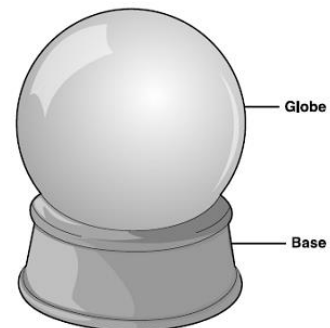
**Volume of a sphere :  $V =$**

Examples

1. Determine the volume of each :



2. A gift shop sells water-filled spherical globes that sit on bases.



There are two sizes to choose from.

- A small globe has a radius of 6 cm.
- A large globe has a radius of 18 cm.

Mary thinks that the volume of water contained by the large globe is about three times the volume of water in the small globe.

Is she correct? Justify your answer.

## Unit 1 – Lesson 8 Worksheet

1. How many ping pong balls will fit into a tennis ball?

$d = 4 \text{ cm}$



$d = 7 \text{ cm}$



2. Air is pumped to fill a spherical balloon. Each time air is pumped,  $300 \text{ cm}^3$  of air enters the balloon. How many times must air be pumped to fill an empty spherical balloon to a radius of  $10 \text{ cm}$ ?
3. Melissa is selling ice-cream cones at the fall fair. Each carton of ice cream is  $20 \text{ cm}$  by  $11 \text{ cm}$  by  $24 \text{ cm}$ . The ice cream scoop makes a sphere of ice cream, with diameter  $8 \text{ cm}$ .
- How many scoops should Melissa get from each carton?
  - Each carton of ice cream costs  $\$4.29$ . How much does each scoop cost?
  - Melissa pays  $\$1.99$  for a package of 12 waffle cones. How much must Melissa charge her customers for a single scoop cone?