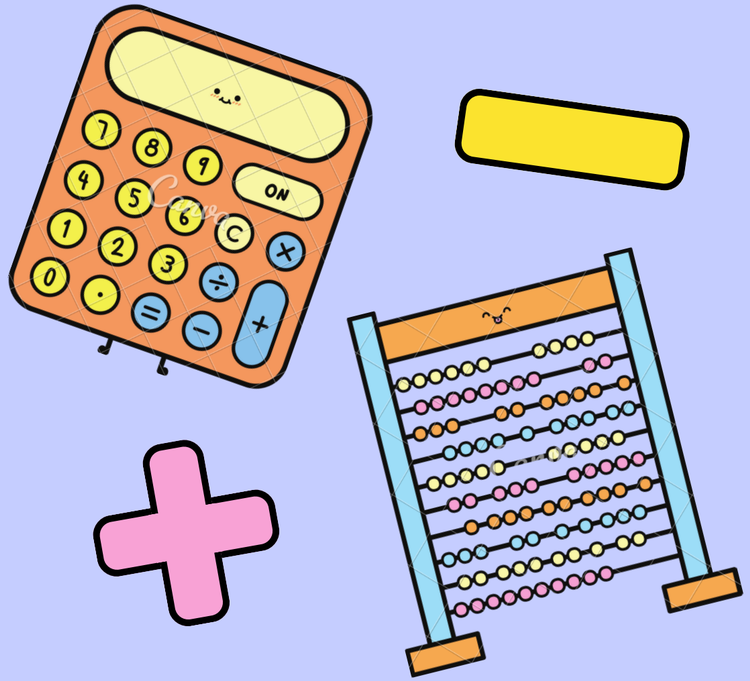
Volume

Volume is defined as the amount of space occupied inside an object's surrounds in three dimensions. This is sometimes referred to as the object's capacity.

Today's Lesson

- Sphere
- Cube
- Cylinder
- Cone



Tip: Use links to go to a different page inside your presentation. Links work best for pages like this one!

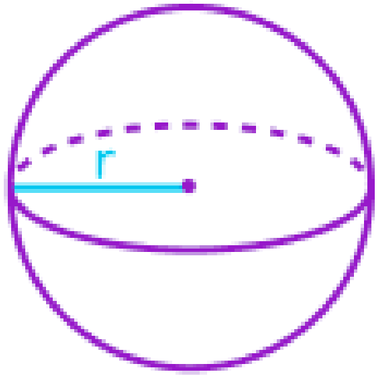
How: Highlight text, click on the link symbol on the toolbar, and select the page in your presentation that you want to connect.

By the end of this lesson...

- Identify volume as a characteristic of solid forms.
- To calculate the volume of basic rectangular prisms, count the cubic units.
- It will help us determine the amount required to fill the object.

Sphere

The most fundamental and typically encountered three-dimensional form is the sphere. The volume of a sphere is computed using its radius.

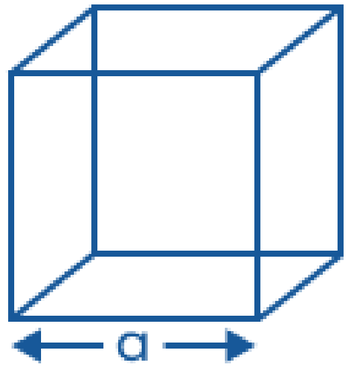


Volume of Sphere

$$= \frac{4}{3}\pi r^3$$

Cube

The cube is the next most basic and popular three-dimensional form. It is distinguished by its characteristic that each side of the cube is of equal length.

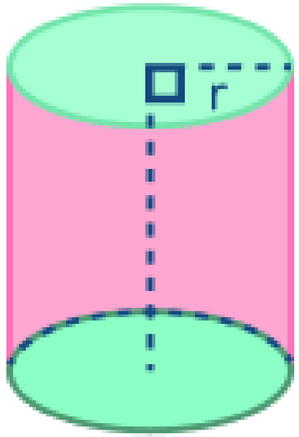


Volume of cube

$a \times a \times a = a^3$

Cylinder

A cylinder is a three-dimensional form having round bases and a height between them.

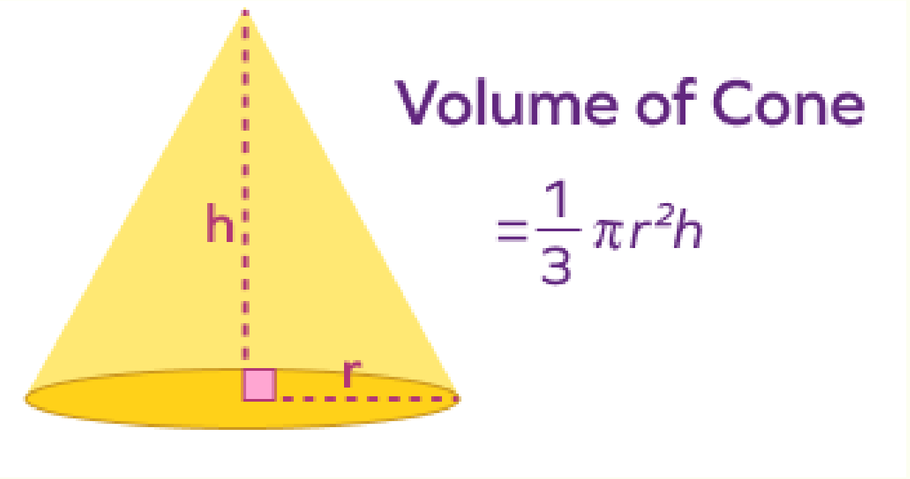


Volume of a Cylinder

$= \pi r^2 h$

Cone

A cone is a unique three-dimensional geometric shape with a flat surface and a curving surface directed upwards.



Let's Try

Joni carries a cylindrical water bottle with a base radius of 5 cm and a height of 10 cm. What is the bottle's water capacity?

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Joni carries a cylindrical water bottle with a base radius of 5 cm and a height of 10 cm. What is the bottle's water capacity?

Volume of the bottle= πr^2h

= π (5 x 5) x 10

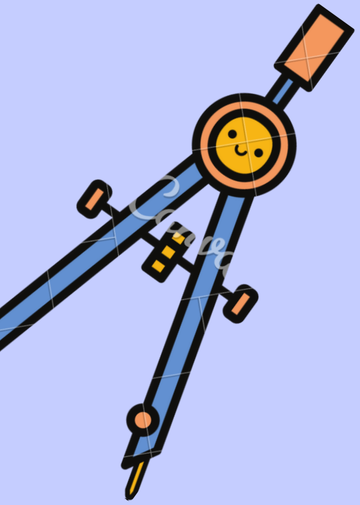
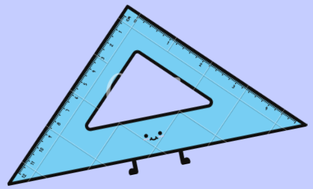
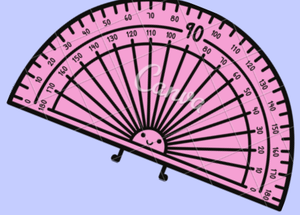
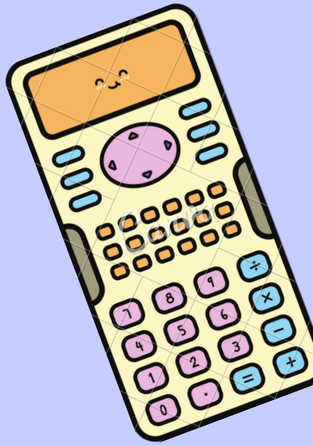
= π x 250

= 3.14 x 250

= 785 cm^3

= 785 ml (1 cm^3 = 1 ml)

bottle's water capacity

You did great.

See you next time!