



Grade 8

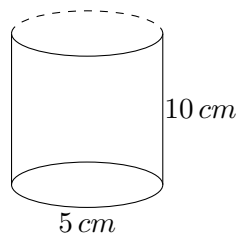
Topic: Volumes of Cylinders

Instructions

Use the formula $V = \pi r^2 h$ to find the volume of each cylinder. Use $\pi \approx 3.14$ if necessary. Show all work and round your answers to two decimal places.

Practice Problems

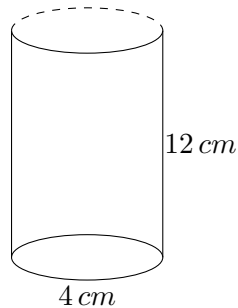
1. Find the volume of a cylinder with radius 5 cm and height 10 cm .



2. A cylinder has diameter 12 cm and height 15 cm . Find its volume.
3. The height of a cylinder is 8 m , and the volume is 603.2 m^3 . Find the radius of the base.
4. Find the height of a cylinder with volume $1,570\text{ cm}^3$ and radius 7 cm .
5. A cylindrical water tank has a radius of 3.5 m and height 6 m . How many cubic meters of water can it hold?

Word Problems

1. A can of soup is in the shape of a cylinder with a diameter of 8 cm and a height of 12 cm . What is the volume of the soup can?



2. A cylindrical swimming pool has a radius of 4 m and is filled to a depth of 2 m . Find the volume of water in the pool.

Multiple-Choice Questions

1. What is the formula for the volume of a cylinder?
 - A. $V = 2\pi rh$
 - B. $V = \pi r^2 h$
 - C. $V = \pi r^2 + 2\pi rh$
 - D. $V = \frac{4}{3}\pi r^3$
2. A cylinder has radius 6 cm and height 10 cm . What is its approximate volume?
 - A. $1,131\text{ cm}^3$
 - B. $1,200\text{ cm}^3$
 - C. $1,131.6\text{ cm}^3$
 - D. $1,250\text{ cm}^3$
3. If the radius of a cylinder is doubled, what happens to its volume?
 - A. It doubles.
 - B. It triples.
 - C. It becomes four times as large.
 - D. It stays the same.

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