GRADE 8 MATH · CLASSWORK · SPECIAL ED

Find an Unknown Measure

SCORE / 25

01 Part A · Practice

Put the known values into V = πr²h and solve: divide to find h, or divide and take a square root to find r.

EXAMPLE

A cylinder has $V = 150\pi$ in.^{3} **and** $h = 6$ **in. Find** r**.**

1. $150\pi = \pi r^2(6)$.
2. Divide both sides by 6π: $r^2 = 25$.
3. $r = \sqrt{25} = 5$ in.

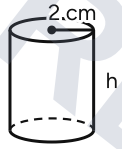
WORDS TO KNOW

formula	a rule written with variables, like V = πr²h
square root	a number that times itself gives the value: $\sqrt{49} = 7$
unknown	the measure you need to find

1 ●○○

The volume of the cylinder is 113.04 cm^3. Find the height h. Use $\pi \approx 3.14$.

HINT Find the base area first. Then height = volume ÷ base area.



2 ●○○

The volume of a cylinder is 1130.4 yd^3. Its height is 10 yd. What is its diameter? Use $\pi \approx 3.14$.

HINT Find the radius first ($r^2 = V \div (\pi h)$), then double it.

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