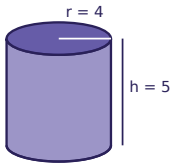
Task card 1 Volume: Changing Radius & Height

A cylinder and a cone have the same radius and the same height. The cylinder holds 180 cubic cm. How much does the cone hold, in cubic cm?

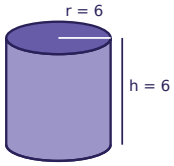
Task card 2 Volume: Changing Radius & Height

A cylinder has a volume of 80π cubic cm and a radius of 4 cm. What is its height, in cm?



Task card 3 Volume: Changing Radius & Height

A cylinder has a volume of 216π cubic cm and a radius of 6 cm. What is its height, in cm?



Task card 4 Volume: Changing Radius & Height

A cylinder has a volume of 36 cubic inches. Its radius is multiplied by 5. What is the new volume, in cubic inches?

Task card 5 Volume: Changing Radius & Height

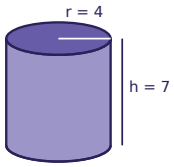
The radius of a cylinder triples and its height stays the same. How many times as large is the new volume?

Task card 6 Volume: Changing Radius & Height

A cylinder has a volume of 6 cubic inches. Its radius triples. What is the new volume, in cubic inches?

Task card 7 Volume: Changing Radius & Height

A cylinder has a volume of 112π cubic cm and a radius of 4 cm. What is its height, in cm?



Task card 8 Volume: Changing Radius & Height

The radius of a cylinder is multiplied by 4 and its height stays the same. How many times as large is the new volume?

Task card 9 Volume: Changing Radius & Height

The radius of a cone triples and its height stays the same. How many times as large is the new volume?

Task card 10 Volume: Changing Radius & Height

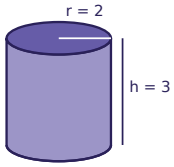
A cylinder has a volume of 59 cubic inches. Its radius doubles. What is the new volume, in cubic inches?

Task card 11 Volume: Changing Radius & Height

A cylinder and a cone have the same radius and the same height. The cylinder holds 333 cubic cm. How much does the cone hold, in cubic cm?

Task card 12 Volume: Changing Radius & Height

A cylinder has a volume of 12π cubic cm and a radius of 2 cm. What is its height, in cm?

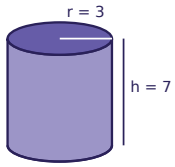


Task card 13 Volume: Changing Radius & Height

The height of a cylinder triples and its radius stays the same. How many times as large is the new volume?

Task card 14 Volume: Changing Radius & Height

A cylinder has a volume of 63π cubic cm and a radius of 3 cm. What is its height, in cm?

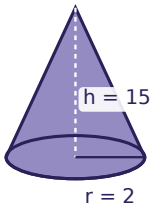


Task card 15 Volume: Changing Radius & Height

A cylinder has a volume of 24 cubic inches. Its radius is multiplied by 4. What is the new volume, in cubic inches?

Task card 16 Volume: Changing Radius & Height

A cone has a volume of 20π cubic cm and a radius of 2 cm. What is its height, in cm?



Task card 17 Volume: Changing Radius & Height

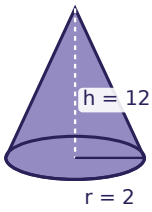
The length and the width of a rectangular prism both are multiplied by 4, and its height stays the same. How many times as large is the new volume?

Task card 18 Volume: Changing Radius & Height

The length and the width of a rectangular prism both are multiplied by 5, and its height stays the same. How many times as large is the new volume?

Task card 19 Volume: Changing Radius & Height

A cone has a volume of 16π cubic cm and a radius of 2 cm. What is its height, in cm?



Task card 20 Volume: Changing Radius & Height

A cylinder's radius doubles and its height triples. How many times as large is the new volume?

Task card 21 Volume: Changing Radius & Height

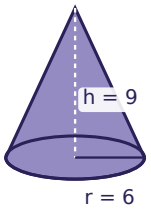
The length and the width of a rectangular prism both double, and its height stays the same. How many times as large is the new volume?

Task card 22 Volume: Changing Radius & Height

A cylinder has a volume of 14 cubic inches. Its radius is multiplied by 5. What is the new volume, in cubic inches?

Task card 23 Volume: Changing Radius & Height

A cone has a volume of 108π cubic cm and a radius of 6 cm. What is its height, in cm?



Task card 24 Volume: Changing Radius & Height

The height of a cylinder is multiplied by 5 and its radius stays the same. How many times as large is the new volume?

Volume: Changing Radius & Height Task Cards

Recording sheet · Grade 8 · Use $V = \pi r^2 h$ for a cylinder and $V = \frac{1}{3}\pi r^2 h$ for a cone. Leave answers in terms of π when the question does.

Scan to check your answers

Name: _____ Date: _____

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20
21	22	23	24

Volume: Changing Radius & Height Task Cards: Answer Key

Grade 8 · Medium

The answers online

1. 60	**2.** 5	**3.** 6
4. 900	**5.** 9	**6.** 54
7. 7	**8.** 16	**9.** 9
10. 236	**11.** 111	**12.** 3
13. 3	**14.** 7	**15.** 384
16. 15	**17.** 16	**18.** 25
19. 12	**20.** 12	**21.** 4
22. 350	**23.** 9	**24.** 5