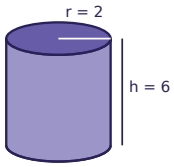
Task card 1 Volume: Changing Radius & Height

A cylinder has a volume of 24π cubic cm and a radius of 2 cm. What is its height, in cm?



Task card 2 Volume: Changing Radius & Height

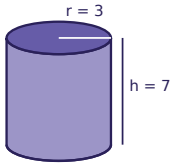
A cylinder has a volume of 49 cubic inches. Its radius triples. What is the new volume, in cubic inches?

Task card 3 Volume: Changing Radius & Height

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

Task card 4 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?

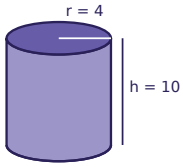


Task card 5 Volume: Changing Radius & Height

A cylinder has a volume of 33 cubic inches. Its radius is multiplied by 5. What is the new volume, in cubic inches?

Task card 6 Volume: Changing Radius & Height

A cylinder has a volume of 160π cubic cm and a radius of 4 cm. What is its height, in cm?



Task card 7 Volume: Changing Radius & Height

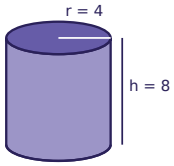
The length and the width of a rectangular prism both triple, and its height stays the same. How many times as large is the new volume?

Task card 8 Volume: Changing Radius & Height

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

Task card 9 Volume: Changing Radius & Height

A cylinder has a volume of 128π cubic cm and a radius of 4 cm. What is its height, in cm?

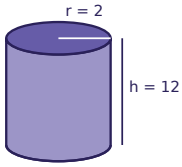


Task card 10 Volume: Changing Radius & Height

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

Task card 11 Volume: Changing Radius & Height

A cylinder has a volume of 48π cubic cm and a radius of 2 cm. What is its height, in cm?

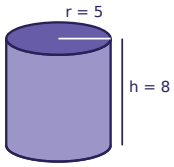


Task card 12 Volume: Changing Radius & Height

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

Task card 13 Volume: Changing Radius & Height

A cylinder has a volume of 200π cubic cm and a radius of 5 cm. What is its height, in cm?



Task card 14 Volume: Changing Radius & Height

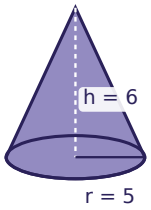
The radius of a cylinder doubles and its height stays the same. How many times as large is the new volume?

Task card 15 Volume: Changing Radius & Height

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

Task card 16 Volume: Changing Radius & Height

A cone has a volume of 50π cubic cm and a radius of 5 cm. What is its height, in cm?

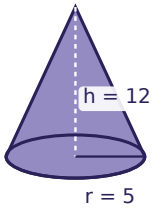


Task card 17 Volume: Changing Radius & Height

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

A cone has a volume of 100π cubic cm and a radius of 5 cm. What is its height, in cm?

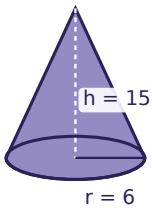


Task card 19 Volume: Changing Radius & Height

A cylinder has a volume of 13 cubic inches. Its radius doubles. What is the new volume, in cubic inches?

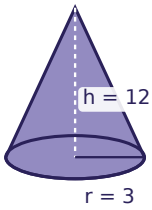
Task card 20 Volume: Changing Radius & Height

A cone has a volume of 180π cubic cm and a radius of 6 cm. What is its height, in cm?



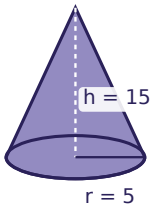
Task card 21 Volume: Changing Radius & Height

A cone has a volume of 36π cubic cm and a radius of 3 cm. What is its height, in cm?



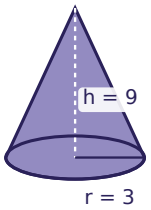
Task card 22 Volume: Changing Radius & Height

A cone has a volume of 125π cubic cm and a radius of 5 cm. What is its height, in cm?



Task card 23 Volume: Changing Radius & Height

A cone has a volume of 27π cubic cm and a radius of 3 cm. What is its height, in cm?



Task card 24 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?

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 · Hard

The answers online

1. 6	**2.** 441	**3.** 25
4. 7	**5.** 825	**6.** 10
7. 9	**8.** 531	**9.** 8
10. 12	**11.** 12	**12.** 45
13. 8	**14.** 4	**15.** 27
16. 6	**17.** 16	**18.** 12
19. 52	**20.** 15	**21.** 12
22. 15	**23.** 9	**24.** 25