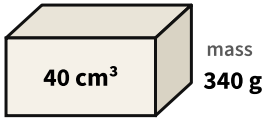
Density

ANSWERS

1

A brass weight has a mass of 340 g and a volume of 40 cm³. Find its density.



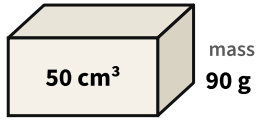
	× 40	
Volume (cm³)	1	40
Mass (g)	8.5	340
	÷ 40	

density = 340 ÷ 40 = 8.5 g/cm³

Answer 8.5 g/cm³

2

A lump of clay has a mass of 90 g and a volume of 50 cm³. Find its density.



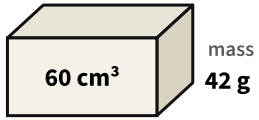
	× 50	
Volume (cm³)	1	50
Mass (g)	1.8	90
	÷ 50	

density = 90 ÷ 50 = 1.8 g/cm³

Answer 1.8 g/cm³

3

An oak block has a mass of 42 g and a volume of 60 cm³. Find its density.



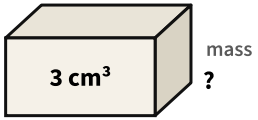
	× 60	
Volume (cm³)	1	60
Mass (g)	0.7	42
	÷ 60	

density = 42 ÷ 60 = 0.7 g/cm³

Answer 0.7 g/cm³

4

A copper coin has a density of 8.9 g/cm³ and a volume of 3 cm³. Find its mass.



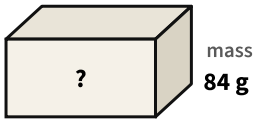
	× 3	
Volume (cm³)	1	3
Mass (g)	8.9	26.7
	× 3	

mass = 8.9 × 3 = 26.7 g

Answer 26.7 g

5

A silver bracelet has a mass of 84 g and a density of 10.5 g/cm³. Find its volume.



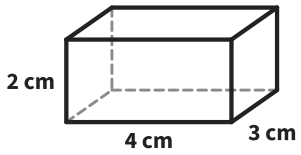
	× 8	
Volume (cm³)	1	8
Mass (g)	10.5	84
	× 8	

volume = 84 ÷ 10.5 = 8 cm³

Answer 8 cm³

6

A steel block is a cuboid. Steel has a density of 7.8 g/cm³. Find the mass of the block.



volume = 4 × 3 × 2 = 24 cm³

Volume (cm³)	1	24
Mass (g)	7.8	187.2

mass = 7.8 × 24

Answer 187.2 g

7

A glass paperweight has a mass of 72 g and a volume of 45 cm³. Jay says its density is 45 ÷ 72 = 0.625 g/cm³.
Explain Jay's mistake, then find the density.

Jay divided the volume by the mass

density = 72 ÷ 45

Answer 1.6 g/cm³

8

A gold ring has a mass of 5.79 g.
Gold has a density of 19.3 g/cm³.
Find the volume of the ring.

volume = 5.79 ÷ 19.3

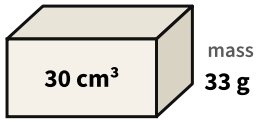
Answer 0.3 cm³

Density *further practice*

ANSWERS

9

A rubber ball has a mass of 33 g and a volume of 30 cm³. Find its density.

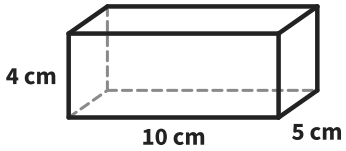


density = 33 ÷ 30

Answer 1.1 g/cm³

10

A block of wax is a cuboid with a mass of 180 g. Find its density.



volume = 10 × 5 × 4 = 200 cm³

density = 180 ÷ 200

Answer 0.9 g/cm³

11

Complete the table.

	Mass (g)	Volume (cm³)	Density (g/cm³)
Cork	12	50	0.24
Marble	54	20	2.7
Ice	46	50	0.92

12

Block A has a mass of 360 g and a volume of 60 cm³. Block B has a mass of 280 g and a volume of 40 cm³.
Which block is denser?
Show your working.

A: 360 ÷ 60 = 6 g/cm³

B: 280 ÷ 40 = 7 g/cm³

Answer Block B

13

Water has a density of 1 g/cm³.
An object floats when it is less dense than water. Which of these float?

	Mass	Volume
Pumice stone	30 g	50 cm³
Pebble	26 g	10 cm³
Apple	170 g	200 cm³

0.6, 2.6 and 0.85 g/cm³

Answer Pumice and apple

14

Blocks A and B are made of the same metal. Block A has a mass of 64 g and a volume of 8 cm³.
Block B has a volume of 15 cm³.
Find the mass of block B.

64 ÷ 8 = 8 g/cm³

8 × 15

Answer 120 g

15

A concrete slab has a volume of 20 000 cm³. Concrete has a density of 2.4 g/cm³. Find the mass of the slab in kilograms.

2.4 × 20 000 = 48 000 g

48 000 ÷ 1000

Answer 48 kg

16

A 10 cm³ block of iron has a mass of 79 g.
Ade says a 100 cm³ block of iron is denser, because it is heavier.
Is Ade right? Explain.

79 ÷ 10 = 7.9 and 790 ÷ 100 = 7.9

the mass of 1 cm³ is the same

Answer No, both 7.9 g/cm³