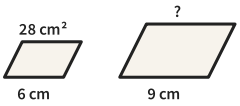
Interleaved: length, area and volume scale factors

1

The two parallelograms are similar.
The smaller one has an area of 28 cm^2.
Find the area of the larger one.



Which method? Length: × k | Area: × k^2 | Volume: × k^3

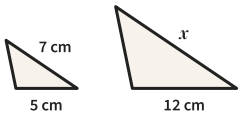
an area: k = 9 ÷ 6 = 1.5, 28 × 1.5^2

63 cm^2

Answer

2

The two triangles are similar.
Find the length marked x.

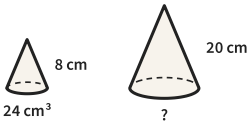


Which method? Length: × k | Area: × k^2 | Volume: × k^3

Answer

3

The two cones are similar. The smaller cone has a volume of 24 cm^3. Find the volume of the larger cone.

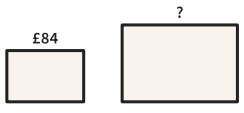


Which method? Length: × k | Area: × k^2 | Volume: × k^3

Answer

4

Turf for a rectangular lawn 6 m long costs £84. A similar lawn is 9 m long.
Turf costs the same per square metre.
How much does turf for the larger lawn cost?



Which method? Length: × k | Area: × k^2 | Volume: × k^3

Answer

5

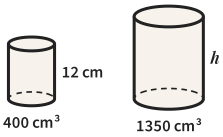
Two similar solid wooden chess pieces are 6 cm and 9 cm tall. The smaller one has a mass of 32 g. Find the mass of the larger one.

Which method? Length: × k | Area: × k^2 | Volume: × k^3

Answer

6

Two similar plant pots hold 400 cm^3 and 1350 cm^3 of compost. The smaller pot is 12 cm tall. How tall is the larger pot?

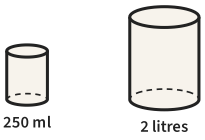


Which method? Length: × k | Area: × k^2 | Volume: × k^3

Answer

7

Two similar tins hold 250 ml and 2 litres. The label on the smaller tin covers 85 cm^2. What area does the label on the larger tin cover?



Which method? Length: × k | Area: × k^2 | Volume: × k^3

Answer

8

A model of a swimming pool is made to a scale of 1 : 25. The model holds 4 litres of water. How much water does the real pool hold?

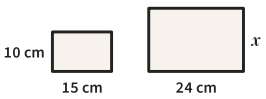
Which method? Length: × k | Area: × k^2 | Volume: × k^3

Answer

Interleaved: length, area and volume scale factors *further practice*

9

A photo is 15 cm long and 10 cm wide.
It is enlarged to a similar photo 24 cm long.
How wide is the enlarged photo?



Answer

10

Two similar pentagons have perimeters of 18 cm and 30 cm. The smaller pentagon has an area of 27 cm^2. Find the area of the larger pentagon.

Answer

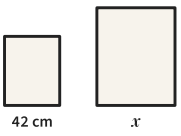
11

A solid bronze statue 60 cm tall has a mass of 48 kg. A similar solid bronze statue is 15 cm tall. Find its mass.

Answer

12

A poster is 42 cm wide. A similar poster has twice the area. How wide is it?
Give your answer to 1 decimal place.



Answer

13

It takes 1.5 litres of paint to cover the outside of a garden shed. A similar shed has a volume 2.744 times as big.
How much paint does the larger shed need?

Answer

14

The surface areas of two similar solids are in the ratio 4 : 9. Find the ratio of their volumes.

Answer

15

A solid is enlarged to make a similar solid. Its volume goes up by 72.8%.
By what percentage does its surface area go up?

Answer

16

Two similar statues have surface areas of 50 cm^2 and 200 cm^2. Zoe says the larger statue is 4 times as tall as the smaller one.
Explain her mistake, and find how many times as tall it is.

Answer