

GCSE Maths: Area and volume units (Higher): worksheet

GCSE Maths - Units and Compound Measures - Higher - Lesson 16.2

Name: _____

Date: _____

Score: _____

15 questions. Write your answers in the spaces. Answers and step-by-step help are free at websink.site/gcse/maths/ch16-units-compound-measures/higher/area-and-volume-units/

Exercise 16C Converting area and volume units Non-calculator

1 Change each area to the unit shown.

(a) 2 m^2 to cm^2

Answer:

(b) 0.5 m^2 to cm^2

Answer:

(c) 3 cm^2 to mm^2

Answer:

(d) 1.2 cm^2 to mm^2

Answer:

2 Change each area to the unit shown.

(a) $50,000 \text{ cm}^2$ to m^2

Answer:

(b) $25,000 \text{ cm}^2$ to m^2

Answer:

(c) 700 mm^2 to cm^2

Answer:

(d) 450 mm^2 to cm^2

Answer:

3 Change each area to the unit shown.

(a) 2 km^2 to m^2

Answer:

(b) $3,500,000 \text{ m}^2$ to km^2

Answer:

(c) 0.04 m^2 to cm^2

Answer:

(d) $62,000 \text{ cm}^2$ to m^2

Answer:

4 Change each volume to the unit shown.

(a) 3 m^3 to cm^3

Answer:

(b) 2.5 cm^3 to mm^3

Answer:

(c) $4,500,000 \text{ cm}^3$ to m^3

Answer:

(d) 6000 mm^3 to cm^3

Answer:

5 Change each amount to the unit shown.

(a) 4500 cm^3 to litres

Answer:

(b) 3 litres to cm^3

Answer:

(c) 2 m^3 to litres

Answer:

(d) 750 litres to m^3

Answer:

6 A cuboid has edges 2 cm, 3 cm and 4 cm. Work out its volume in mm^3 .

Answer:

7 A carpet measures 4 m by 2.5 m. Work out its area in cm^2 .

Answer:

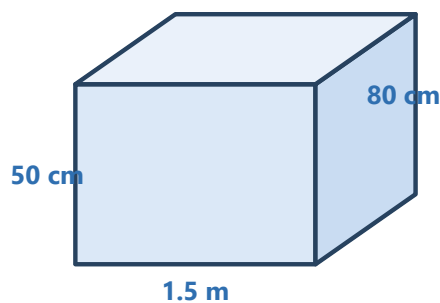
8 A floor is 3 m by 2 m. It is covered with square tiles of side 20 cm. How many tiles are needed?

Answer:

9 Kayla says " $1 \text{ m} = 100 \text{ cm}$, so $1 \text{ m}^2 = 100 \text{ cm}^2$ ". Explain why she is wrong and give the correct value.

Answer:

10 A tank is a cuboid 1.5 m long, 80 cm wide and 50 cm high. Work out its capacity in litres.



Answer:

11 A fish tank is 60 cm long, 30 cm wide and 40 cm high. It is filled to a depth of 30 cm. How many litres of water are in the tank?

Answer:

12 Which is larger, 0.6 m^2 or 5500 cm^2 ? Show your working.

Answer:

13 A square has sides of length x metres. Write an expression for its area in cm^2 .

Answer:

14 A cube has edge length a cm. Show that its volume in m^3 is $\frac{a^3}{1\,000\,000}$.

Answer:

15 A swimming pool is a cuboid 25 m long, 10 m wide and 1.6 m deep. (a) Work out the volume in litres when it is full. (b) A pump fills it at 500 litres per minute. How long does it take? Give your answer in hours and minutes.

(a) Volume in litres

Answer:

(b) Time to fill

Answer: