



Units and Conversions Exam Practice

Q1. (i) Change 750 ml to litres

0.75 l

(ii) Change 3.2 litres to ml

3200 ml

Answer: 0.75 l, 3200 ml
(2 marks)

Q2. (i) Change 11.2 km to metres

11200 m

(ii) Change 50 m to km

0.05 km

Answer: 11200 m, 0.05 km
(2 marks)

Q3. Starting with the smallest, put these units in order of size:

cm	metres	millimetres	inches	feet	yards
(2)	(6)	(1)	(3)	(4)	(5)

Answer: _____
(2 marks)



Q4. (i) Change 285 g to kg

$$0.285 \text{ kg}$$

(ii) Change 1.2 kg to g

$$1200 \text{ g}$$

Answer: 0.285 kg, 1200g
(2 marks)

Q5. Convert 8.5 feet to inches

$$8.5 \times 12 = 100 \text{ inches}$$

Answer: 100 inches
(1 mark)

Q6. Convert 3500 ml to litres

$$3.5 \text{ l}$$

Answer: 3.5 l
(1 mark)



Multi-step conversions

Q7. Change 30 metres to mm

$$30\text{m} \times 100 = 3000\text{ cm}$$

$$3000\text{ cm} \times 10 = 30000\text{ mm}$$

Answer: 30,000 mm
(2 marks)

Q8. Change 0.5 km to cm

$$0.5\text{ km} = 500\text{ m}$$

$$500\text{ m} = 500 \times 100\text{ cm}$$

$$\Rightarrow 0.5\text{ km} = 50000\text{ cm}$$

Answer: 50000 cm
(2 marks)

Q9. Change 18000 g to tonnes.

$$\cdot 18000\text{ g} \div 1000 = 18\text{ kg}$$

$$\cdot 18\text{ kg} \div 1000 = 0.018\text{ Tonnes}$$

Answer: 0.018 Tonnes
(2 marks)



Q10. Change 9900 mm to metres.

$$9900 \div 10 = 990 \text{ cm}$$

$$990 \text{ cm} \div 100 = 9.9 \text{ m}$$

Answer: 9.9 m
(2 marks)

Q11. Change 25 cm to km

$$25 \text{ cm} = 0.25 \text{ m}$$

$$0.25 \text{ m} \div 1000 = 0.0025 \text{ km}$$

Answer: 0.0025 km
(2 marks)



Q12. In this question, take **1 yard = 36 inches**, and use the approximation
1 inch = 2.5 cm

(i) Convert 3 yards to cm

$$3 \times 36 = 108 \text{ inches}$$

$$108 \times 2.5 = 270 \text{ cm}$$

(ii) Convert 680 mm to inches

$$680 \div 10 = 68 \text{ cm}$$

$$68 \div 2.5 = 27.2 \text{ inches}$$

Answer: 27.2 inches
(4 marks)

Q13. A **centilitre** is one hundredth of a litre. Convert 4650 ml to centilitres.

$$\bullet \text{ 1 centilitre } \left(= \frac{1000}{100} \right) = 10 \text{ ml}$$

$$\bullet \text{ 4650 ml } \div 10 \text{ ml} = 465 \text{ centilitres}$$

Answer: 465 centilitres
(2 marks)



Area & Volume conversions

Q14. (i) State how many cm squared there are in one metre squared.

$$\begin{aligned}1\text{m}^2 &= 100\text{cm} \times 100\text{cm} \\ &= 10000\text{cm}^2\end{aligned}$$

Answer: 10000 cm²
(1 mark)

(ii) Hence convert 15 m² to cm²

$$15 \times 10000\text{cm}^2 = 150000\text{cm}^2$$

Answer: 150000 cm²
(1 mark)

Q15. (i) Convert 250 mm² to cm²

$$\begin{aligned}1\text{cm}^2 &= (10\text{mm} \times 10\text{mm}) \Rightarrow 1\text{cm}^2 = 100\text{mm}^2 \\ 250 \div 100 &= 2.5\text{cm}^2\end{aligned}$$

(ii) Convert 0.2 km² to m²

$$\begin{aligned}1\text{km}^2 &= 1000\text{m} \times 1000\text{m} \Rightarrow 1\text{km}^2 = 1,000,000\text{m}^2 \\ 0.2\text{km}^2 &= 200,000\text{m}^2\end{aligned}$$

Answer: 2.5 cm², 200,000 m²
(4 marks)



Q16. Change $754,000,000 \text{ cm}^2$ to km^2

$$\cdot 1 \text{ m}^2 = 10000 \text{ cm}^2$$

$$\cdot 754,000,000 \div 10000 = 75400 \text{ m}^2$$

$$\cdot 75400 \div 1,000,000 = 0.075400 \text{ km}^2$$

Answer: 0.075400 km²
(2 marks)

Q17. (i) Convert 8000 mm^3 to cm^3

$$1 \text{ cm}^3 = 10 \text{ mm} \times 10 \text{ mm} \times 10 \text{ mm}$$

$$\Rightarrow 1 \text{ cm}^3 = 1000 \text{ mm}^3$$

$$\Rightarrow 8000 \div 1000 = 8 \text{ cm}^3$$

(ii) Convert 0.00025 km^3 to m^3

$$\cdot 1 \text{ km}^3 = 1000^3 \text{ m}^3 = 1000000000 \text{ m}^3$$

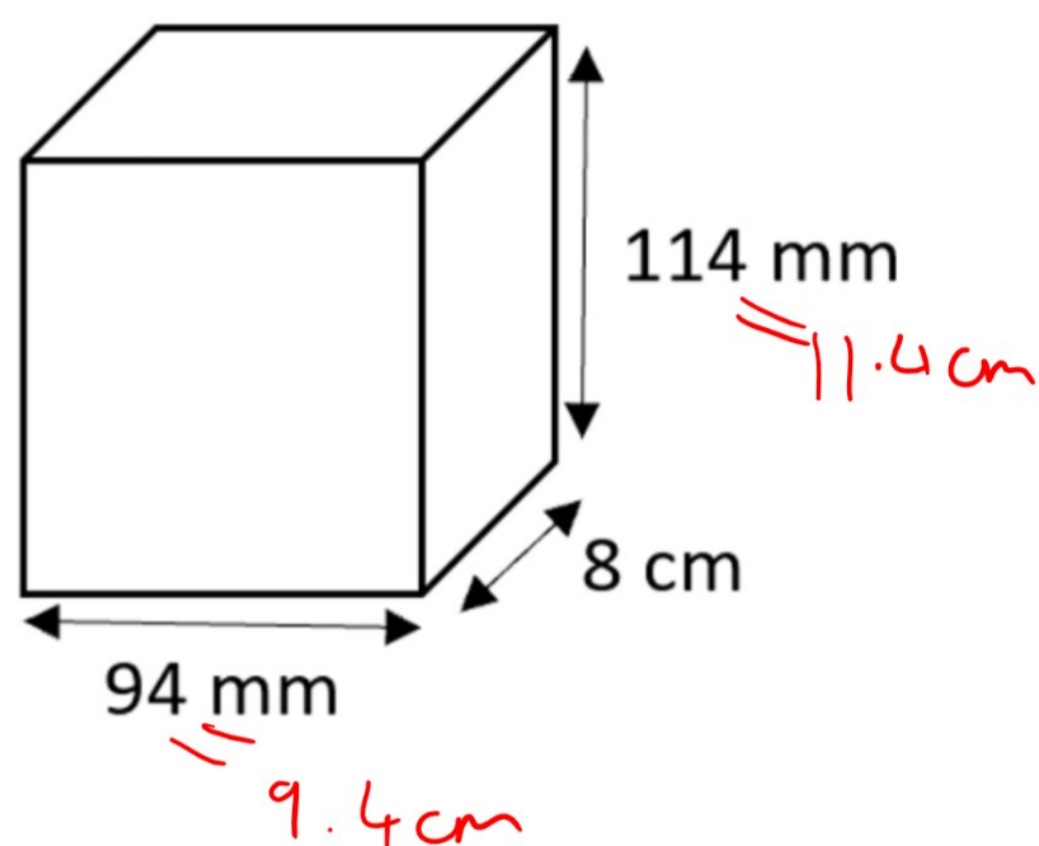
$$\cdot 0.00025 \times 1000000000 = 250000 \text{ m}^3$$

Answer: 250000 m³
(4 marks)



Applied Mixed Practice Problems

Q18. Sugar cubes measure 1 cm^3 in volume. Work out how many sugar cubes can fit inside the box shown:

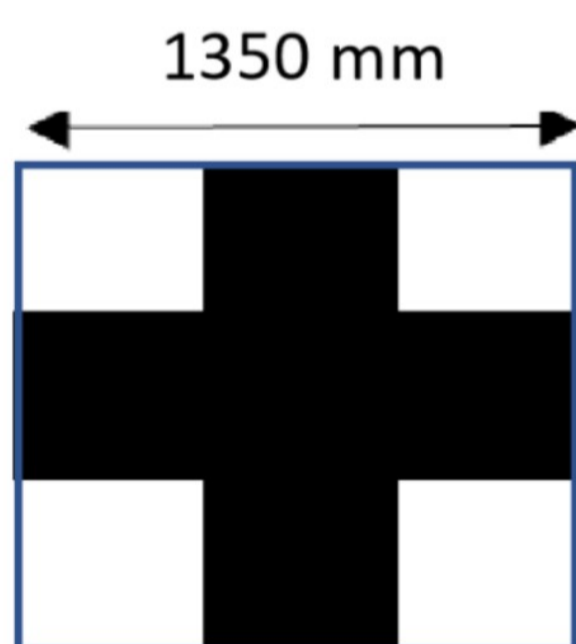


$$\text{Vol} = 857.28 \text{ cm}^3$$

Answer: 857 cubes
(3 marks)

Q19. An art display is in the form of a square containing 9 identical squares inside. The cross shape shown is to be painted gold, and the rest of the logo is to be painted silver. A can of silver paint can cover 5000 cm^2 , whilst a can of gold paint can cover 3000 cm^2 .

Work out how many cans of silver paint and gold paint will be needed to paint the display.



- Each square is $1350 \div 3 = 450 \times 450 \text{ mm}$
- In cm^2 , this is $202500 \text{ mm}^2 \div 100 = 2025 \text{ cm}^2$
- Cross-shape: 5 squares, with area 10125 cm^2 .
 $\Rightarrow 10125 \div 3000 = 3.375$
(4 cans required)
- Rest: 4 squares has area 8100 cm^2
 $\Rightarrow 8100 \div 5000 = 1.62 \text{ cans}$ (2 cans)

Answer: 4 gold, 2 silver
(4 marks)

