Volume: 10 practice questions

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Name: _____ Date: _____

Attempt all questions and show your working. Suggested time: 15 to 20 minutes.

Section A: Consolidating (Questions 1-4)

Question 1

Find the volume of a rectangular prism that is 5 cm long, 4 cm wide and 3 cm high.

Question 2

Convert:

(a) 2.5 L to millilitres

(b) 3000 cm^3 to litres

(c) 4 m^3 to litres

Question 3

Find the volume of a cube with edges 6 cm long.

Question 4

A prism has a cross-sectional area of 15 cm^2 and a length of 8 cm. Find its volume.

Section B: Standard (Questions 5-10)

Question 5

A triangular prism has a cross-section that is a triangle with a base of 6 cm and a perpendicular height of 4 cm. The prism is 10 cm long. Find its volume.

Question 6

A fish tank is a rectangular prism 60 cm long, 30 cm wide and 40 cm high.

(a) Find the capacity of the tank in litres.

(b) The tank is filled with water to 5 cm below the top. How many litres of water are in the tank?

Question 7

A swimming pool is 25 m long and 10 m wide. The depth increases evenly from 1 m at the shallow end to 2 m at the deep end, so the side view of the pool is a trapezium.

(a) Find the area of the trapezium side view.

(b) Find the volume of the pool in cubic metres.

(c) How many litres of water does the pool hold when full?

Question 8

A rectangular prism has a volume of 360 cm³. It is 12 cm long and 6 cm wide. Find its height.

Question 9

A prism has an L-shaped cross-section. The L shape is an 8 cm by 6 cm rectangle with a 3 cm by 4 cm rectangle removed from one corner. The prism is 10 cm long.

(a) Find the area of the cross-section.

(b) Find the volume of the prism.

Question 10

Convert:

(a) 0.75 m³ to litres

(b) 2 m³ to cm³

(c) 450 mL to cm³

Volume: answers

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Question 1

Answer: 60 cm³

Question 2

Answer: (a) 2500 mL (b) 3 L (c) 4000 L

Question 3

Answer: 216 cm³ (6 × 6 × 6)

Question 4

Answer: 120 cm³ (15 × 8)

Question 5

Answer: 120 cm³ (½ × 6 × 4 × 10)

Question 6

Answer: (a) 72 L (72,000 cm³) (b) 63 L (60 × 30 × 35 = 63,000 cm³)

Question 7

Answer: (a) 37.5 m² (½ × (1 + 2) × 25) (b) 375 m³ (c) 375,000 L

Question 8

Answer: 5 cm (360 ÷ 72)

Question 9

Answer: (a) 36 cm² (48 - 12) (b) 360 cm³

Question 10

Answer: (a) 750 L (b) 2,000,000 cm³ (c) 450 cm³