Volume of a Cuboid
Video 355 on www.corbettmaths.com

Examples

Workout

Question 1: Work out the volume of each cuboid. Include suitable units.

(a) 3 cm x 4 cm x 10 cm
(b) 11 cm x 2 cm x 3 cm
(c) 6 cm x 5 cm x 5 cm
(d) 4 cm x 20 cm x 25 cm
(e) 6 cm x 50 cm x 90 cm
(f) 7.2 cm x 4.5 cm x 4.5 cm

Question 2: Work out the volume of each cube. Include suitable units.

(a) 3 cm x 3 cm x 3 cm
(b) 5 m x 5 m x 5 m
(c) 7 mm x 7 mm x 7 mm
(d) 21 cm x 21 cm x 21 cm
(e) 0.6 cm x 0.6 cm x 0.6 cm
(f) 4 1/2 m x 4 1/2 m x 4 1/2 m

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Question 3:  Find the length of each cuboid.

(a) Volume: 140cm³  
(b) Volume: 160cm³  
(c) Volume: 432cm³

Question 4: For each cuboid below, find the missing measurement, y.

(a) Volume: 960cm³  
(b) Volume: 990cm³  
(c) Volume: 3500mm³

Question 5: The volume of each cube is given. Find the length of each side, x.

(a) Volume: 64m³  
(b) Volume: 1000cm³  
(c) Volume: 74.088cm³

Question 1: Find the volume of a water tank that is 80cm long, 40cm wide and 20cm high.

Question 2: A wooden beam measures 4 inches wide by 4 inches high by 60 inches long. Work out the volume of the wooden beam.

Question 3: The cube on the TV show “The Cube” is a cube with each side measuring 4m. Work out the volume of the cube.

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Question 4: Both cuboids below have the same volume. Find the height of cuboid B.

Question 5: The volume of the cube is twice the volume of the cuboid. Find the length of the cuboid.

Question 6: The cuboid container below is used to store boxes. Each box is a cube with side length 1m. How many boxes can be stored in the container?

Question 7: The cuboid container below is used to store boxes. Each box is a cube with side length 50cm. How many boxes can be stored in the container?

Question 8: An empty swimming pool is going to be filled with water. The swimming pool is a cuboid, that is 25 metres long, 10 metres wide and 2 metres deep. It is being filled at a rate of 800 litres per minute. Given $1\text{m}^3 = 1000$ Litres, how long will it take to fill the swimming pool? Give your answer in hours and minutes.
Question 9: Shown is a net of a cuboid. Calculate the volume of the cuboid.

Question 10: A carton of orange juice is shown below. The carton is in the shape of a cuboid.

The depth of the orange juice is 6cm.

The carton is turned so that it stands the shaded (orange) face.

Work out the depth of the orange juice now.

Question 11: Peter is making green paint by mixing blue and yellow paint in a cuboid container, shown below. The container has a width of 30cm and length of 40cm and is full. He mixes blue paint and yellow paint in the ratio 2:3. Peter uses 8.4 litres of blue paint. Calculate the height of the container.