

# Y6 Volume Cuboids

KS2 Y6 Maths · Follows the national curriculum

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

## 1. Worked example

**Find the volume of a cuboid 5 cm long, 3 cm wide and 2 cm high.**

Step 1 · Cubes in one layer:  $5 \times 3$

15

Step 2 · 2 layers:  $15 \times 2$

30

**Answer: 30 cm<sup>3</sup>**

Check: Volume = length  $\times$  width  $\times$  height =  $5 \times 3 \times 2$  ✓

## 2. Now try one with the steps

**Find the volume of a cube with edges of 4 cm.**

Step 1 · All edges are equal:  $4 \times 4 \times 4$

Step 2 · Calculate

**Answer:**

## 3. Practice

Have a go at each one. There is space underneath to work it out.

**1.** Find the volume of a cuboid 4 cm  $\times$  3 cm  $\times$  2 cm.

---

---

**2.** Find the volume of a cuboid 6 cm  $\times$  5 cm  $\times$  2 cm.

---

---

**3.** Find the volume of a cube with edges of 3 cm.

---

---

**4.** Find the volume of a cuboid 10 cm  $\times$  4 cm  $\times$  3 cm.

---

---

5. Find the volume of a cuboid  $8\text{ cm} \times 5\text{ cm} \times 5\text{ cm}$ .

---

---

6. Find the volume of a cuboid  $7\text{ cm} \times 2\text{ cm} \times 3\text{ cm}$ .

---

---

7. A skip is  $3\text{ m}$  long,  $2\text{ m}$  wide and  $1\text{ m}$  high. Find its volume.

---

---

8. A cuboid has a volume of  $60\text{ cm}^3$ . It is  $5\text{ cm}$  long and  $4\text{ cm}$  wide. How high is it?

---

---

9. The base of a cuboid has an area of  $12\text{ cm}^2$ . Its volume is  $72\text{ cm}^3$ . How high is it?

---

---

10. How many  $1\text{ cm}$  cubes make a  $10\text{ cm}$  cube?

---

---

11. Compare the volumes of a  $6\text{ cm} \times 2\text{ cm} \times 2\text{ cm}$  cuboid and a  $4\text{ cm} \times 3\text{ cm} \times 2\text{ cm}$  cuboid.

---

---

12. Which is the best estimate for the volume of a classroom:  $2\text{ m}^3$ ,  $200\text{ m}^3$  or  $20,000\text{ m}^3$ ?

---

---

13. A box is  $20\text{ cm} \times 10\text{ cm} \times 5\text{ cm}$ . How many  $5\text{ cm}$  cubes fit inside it exactly?

---

---

14. A fish tank is  $50\text{ cm}$  long,  $30\text{ cm}$  wide and  $40\text{ cm}$  high. What is its volume in  $\text{cm}^3$ ?

---

---

15. Give the measurements of two different cuboids that each have a volume of  $36\text{ cm}^3$ .

---

---

#### 4. Before you hand it in

**Adding the edges:**  $5 + 3 + 2 = 10\text{ cm}^3$ .

Volume counts cubes: multiply length  $\times$  width  $\times$  height =  $30\text{ cm}^3$ .

**Writing a volume in cm or cm<sup>2</sup>.**

Length is cm, area is cm<sup>2</sup>, volume is cm<sup>3</sup> (cubic centimetres). Large volumes use m<sup>3</sup>.

**Counting only the cubes you can see in a picture.**

Count one layer (length × width) and multiply by the number of layers.