

Y6 – Spring – Block 5 – Step 8 – Volume of a cuboid Answers

Question	Answer
1	a) 36 cm^3 b) 36 cm^3 c) Part a): count the number of cubes in one layer and multiply by the number of layers. Part b): work out length \times width \times height. The cuboids have the same volume, but the cuboid in part a) is made of centimetre cubes and the cuboid in part c) is a single shape.
2	a) 27 cm^3 b) 40 cm^3
3	a) 192 cm^3 b) 300 cm^3
4	a) 125 cm^3 b) 343 mm^3
5	4 m
6	$150,000 \text{ cm}^3$
7	32 cm^3 32 cm^3 They have the same volume.
8	possible answers: $1 \text{ cm} \times 1 \text{ cm} \times 24 \text{ cm}$ $1 \text{ cm} \times 2 \text{ cm} \times 12 \text{ cm}$ $1 \text{ cm} \times 3 \text{ cm} \times 8 \text{ cm}$ $1 \text{ cm} \times 4 \text{ cm} \times 6 \text{ cm}$ $2 \text{ cm} \times 2 \text{ cm} \times 6 \text{ cm}$ $2 \text{ cm} \times 3 \text{ cm} \times 4 \text{ cm}$
9	86 cm^3 The length of the compound shape is 8 cm. This can be partitioned into 3 cm and 5 cm. The volume of the cuboid that is $6 \text{ cm} \times 3 \text{ cm} \times 2 \text{ cm}$ will equal 36 cm^3 The volume of the cuboid that is $5 \text{ cm} \times 5 \text{ cm} \times 2 \text{ cm}$ will equal 50 cm^3 $36 \text{ cm}^3 + 50 \text{ cm}^3 = 86 \text{ cm}^3$