

***ANSWERS**

- 1a. The cuboid is made out of 6 cm cubes. The volume of the cuboid is 6cm^3
- 1b. The cuboid is made out of 10 cm cubes. The volume of the cube is 10 cm^3
- 2a. $A = 8\text{cm}^3$; $B = 12\text{cm}^3$
- 2b. $A = 12\text{cm}^3$; $B = 8\text{cm}^3$
- 3a. $A. 200\text{cm}^3$; $B. 40\text{cm}^3$
- 3b. $A. 50\text{cm}^3$; $B. 200\text{cm}^3$
- 4a. False. It is 12cm^3
- 4b. False. It is 8cm^3

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- 5a. The cuboid is made out of 16 cm cubes. The volume of the cube is 16 cm^3 .
- 5b. The cuboid is made out of 18 cm cubes. The volume of the cube is 18 cm^3
- 6a. $A = 24\text{cm}^3$; $B = 20\text{cm}^3$.
- 6b. $A = 18\text{cm}^3$; $B = 24\text{cm}^3$.
- 7a. $A. 50\text{cm}^3$; $B. 400\text{cm}^3$; $C. 70\text{cm}^3$. 8a. False. It is 20cm^3
- 7b. $A. 300\text{cm}^3$; $B. 10\text{cm}^3$; $C. 900\text{cm}^3$. 8b. False. It is 18cm^3

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- 9a. The cuboid is made out of 23 cm cubes. The volume of the cube is 23 cm^3
- 9b. The cuboid is made out of 22 cm cubes. The volume of the cube is 22 cm^3
- 10a. $A = 10\text{cm}^3$; $B = 14\text{cm}^3$.
- 10b. $A = 18\text{cm}^3$; $B = 14\text{cm}^3$.
- 11a. $A. 350\text{cm}^3$; $B. 50\text{cm}^3$; $C. 250\text{cm}^3$.
- 11b. $A. 450\text{cm}^3$; $B. 70\text{cm}^3$; $C. 850\text{cm}^3$
- 12a. False. It is 17cm^3
- .12b. False. It is 24cm^3

CHALLENGE

7a. $A + B + (C \text{ or } D)$. A has 17 cubes, B has 21 cubes and C and D both have 7 cubes. $17 + 21 + 7 = 45$.

7b. $A + B + D$. A has 23 cubes, B has 14 cubes and D has 18 cubes. $23 + 14 + 18 = 55$.

8a. 8cm^3 is the odd one out because there is no cuboid that has this number of cubes.

8b. 20cm^3 is the odd one out because there is no cuboid that has this number of cubes.

9a. Yes. By moving the top 2 cubes to the second layer she creates a cuboid that is $3 \times 3 \times 2 = 18\text{cm}^3$.

9b. No. The cuboid would be 4 cubes long, 2 cubes wide and 2 cubes high. Its volume would be $4 \times 2 \times 2 = 16\text{cm}^3$