Volume of a cube/cuboid

1.   Work out the volume of a cube with side length 5 cm.
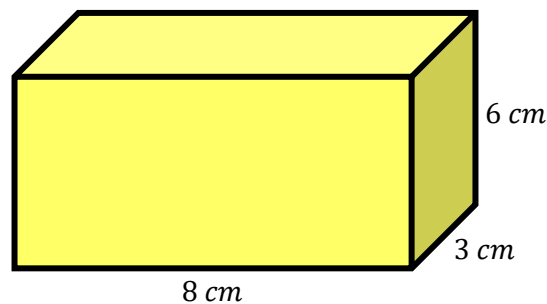
$$5^3 = 125 \; cm^3$$

(2 marks)

2.   Work out the volume of a cube with side length 9 cm.
     State the units.

$$9^3 = 729 \; cm^3$$

(3 marks)

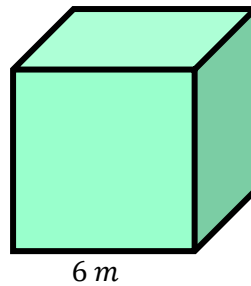3.   Work out the volume of the cuboid.
     State the units.

6 cm

3 cm

8 cm

$$8 \times 3 \times 6 = 144 \; cm^3$$

(3 marks)

Volume of a cube/cuboid

4.   Here is a cube.
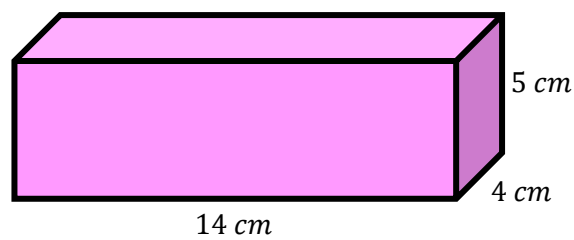

6 m

Work out the volume.

$$6^3 = 216 \ cm^3$$

(2 marks)

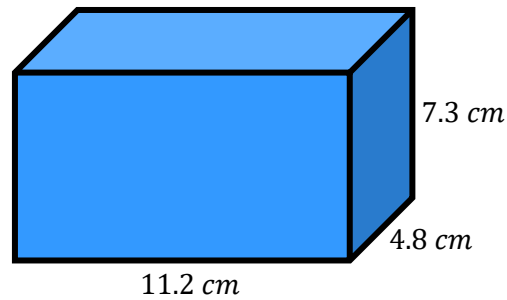5.   Work out the volume of the cuboid.

5 cm

4 cm

14 cm

State the units.

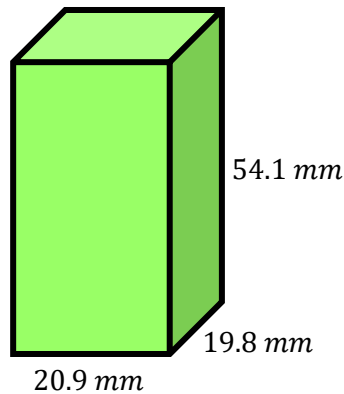$$14 \times 4 \times 5 = 280 \ cm^3$$

(3 marks)

Volume of a cube/cuboid

6. Work out the volume of the cuboid.
    State the units.

7.3 *cm*

4.8 *cm*

11.2 *cm*

$$11.2 \times 4.8 \times 7.3 = 392.448 \ cm^3$$

(3 marks)

7. What is the volume of this cuboid?
    State the units

54.1 *mm*

19.8 *mm*

20.9 *mm*

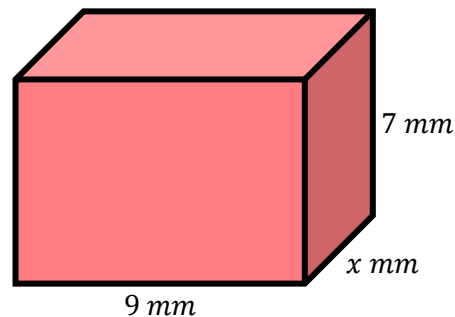$$20.9 \times 19.8 \times 54.1 = 22{,}387.662 \ mm^3$$

(3 marks)

<u>Volume of a cube/cuboid</u>

8.   A cube has a volume of $64\ cm^3$.
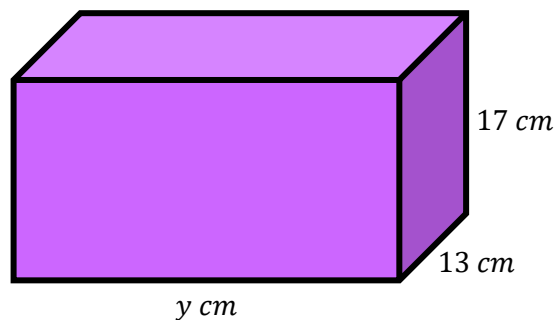What is the side length of the cube?

$$\sqrt[3]{64} = 4\ cm$$

(2 marks)

9.   The cuboid below has a volume of $378\ mm^3$.
Find the length of x.

$$9 \times 7 \times x = 378$$
$$x = 6\ mm$$

(2 marks)

10.   The volume of the cuboid is $4420\ cm^2$.

Find y.

$$17 \times 13 \times y = 4420$$
$$y = 20\ cm$$

(2 marks)

Volume of a cube/cuboid

11.   Both cuboids have the same volume.
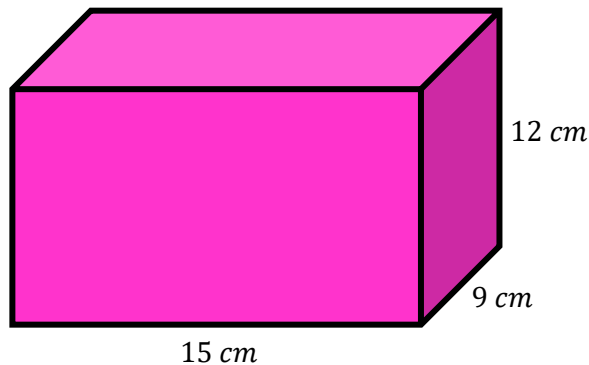
8 cm

6 cm

5 cm

x cm

12 cm

16 cm
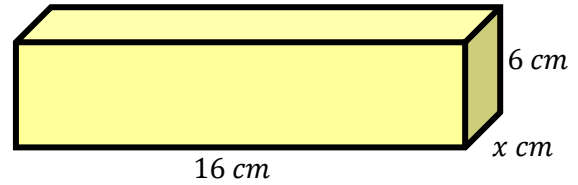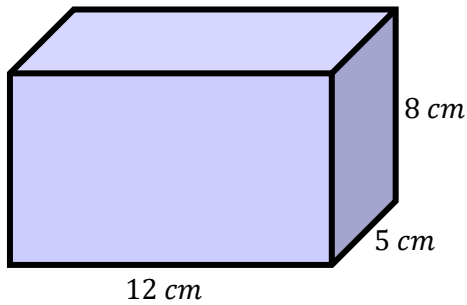
Find x.

$$Blue\ cuboid: 12 \times 8 \times 5 = 480\ cm^3$$
$$Yellow\ cuboid: 16 \times 6 \times x = 480$$
$$x = 5\ cm$$

(3 marks)

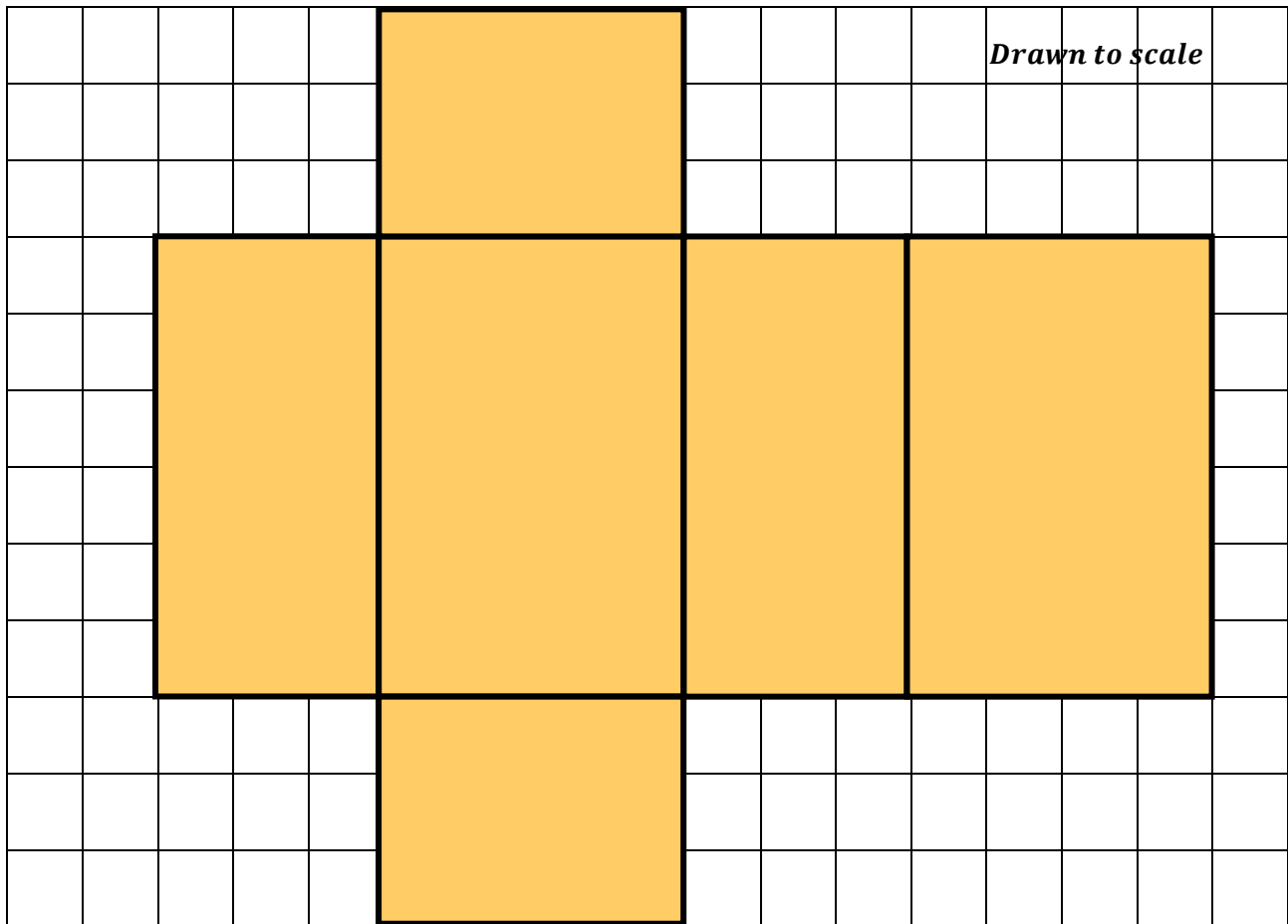12.   How many 1 centimetre cubes can you fit inside of this cuboid?

12 cm

9 cm

15 cm

$$15 \times 9 \times 12 = 1620\ cm\ cubes$$

(2 marks)

Volume of a cube/cuboid

FUNCTIONAL MATHS

13.   Below is a net of a cuboid.
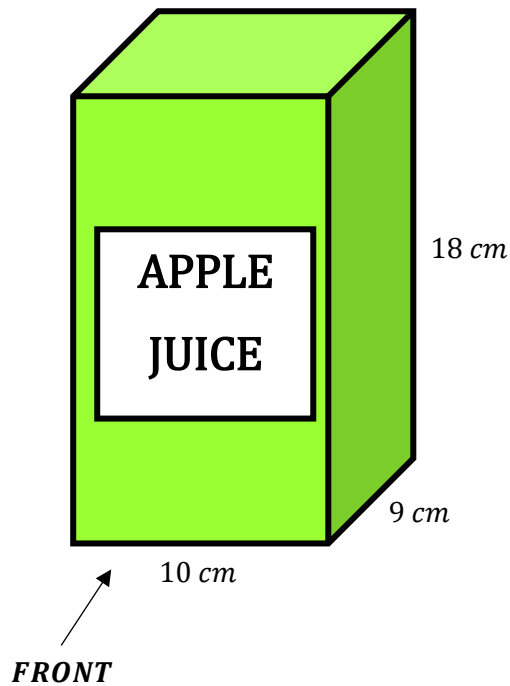Work out the volume.
State the units

Drawn to scale

$$3 \times 4 \times 6 = 72 \, cm^3$$

(3 marks)

Volume of a cube/cuboid

14. Below is a carton of apple juice.
    The depth of the juice is 14 cm.
    The carton is moved to its put flat on its front.
    What is the depth of the juice now?

APPLE

JUICE

18 cm

9 cm

10 cm

FRONT

$Volume: 10 \times 9 \times 14 = 1260 \ cm^3$
$10 \times 18 \times depth = 1260$
$depth = 7 \ cm$

(4 marks)