

Week 5 Year 6 Answers

Monday

Volume of Irregular Shapes

Answer Key:

- 12 cubic units
- 11 cubic units
- 5 cubic units
- 44 cubic units
- 12 cubic units
- 24 cubic units
- 4 cubic units
- 7 cubic units
- 30 cubic units
- 13 cubic units

Extension

(8mm × 4 = 32mm for each side) **32768** mm³

1) a) $27\text{cm}^3 - 1\text{cm}^3 = 26\text{cm}^3$

b) $125\text{cm}^3 - 27\text{cm}^3 = 98\text{cm}^3$

2) a) $2\text{cm} \times 4\text{cm} \times 4\text{cm}$ cuboid = 32cm^3

$2\text{cm} \times 3\text{cm} \times 2\text{cm}$ cuboid = 12cm^3

b) After the two example cuboids are taken into account there are another 8 more different cuboids that can be made:

$3\text{cm} \times 3\text{cm} \times 3\text{cm}$ cuboid = 27cm^3

$4\text{cm} \times 4\text{cm} \times 4\text{cm}$ cuboid = 64cm^3

$2\text{cm} \times 2\text{cm} \times 2\text{cm}$ cuboid = 8cm^3

$3\text{cm} \times 4\text{cm} \times 4\text{cm}$ cuboid = 48cm^3

$3\text{cm} \times 4\text{cm} \times 3\text{cm}$ cuboid = 36cm^3

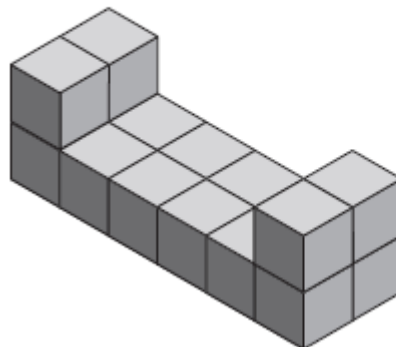
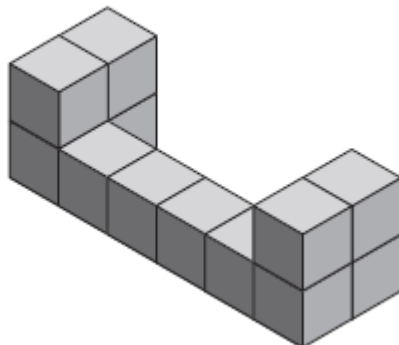
$2\text{cm} \times 4\text{cm} \times 2\text{cm}$ cuboid = 16cm^3

$2\text{cm} \times 3\text{cm} \times 3\text{cm}$ cuboid = 18cm^3

$2\text{cm} \times 3\text{cm} \times 4\text{cm}$ cuboid = 24cm^3



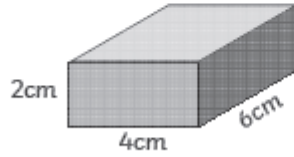
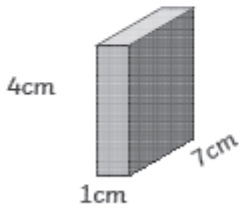
1) Keeva is incorrect. The model could have a volume of 16cm^3 or 12cm^3 .



Tuesday

Compare the volume of the following cuboids.

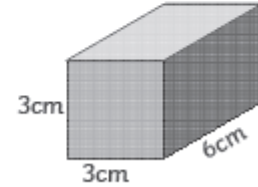
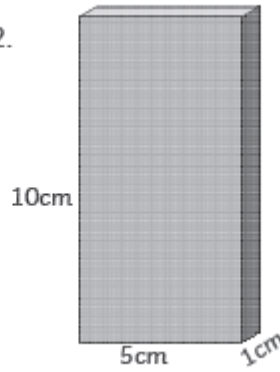
1.



Volume =

Volume =

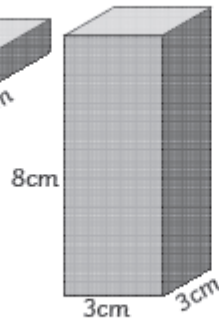
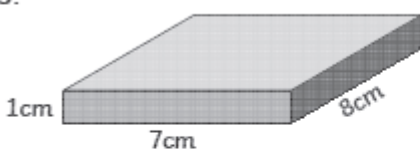
2.



Volume =

Volume =

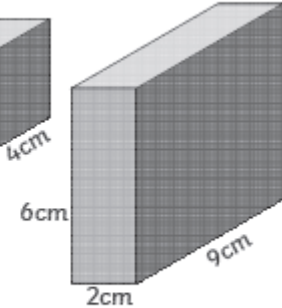
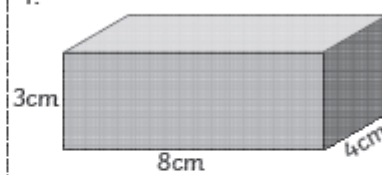
3.



Volume =

Volume =

4.



Volume =

Volume =

1) 162000 cm^3

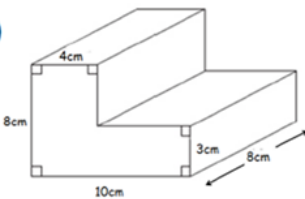
2) 4800 m^3

3) 27 mm^3

4) 1000 cm^3

You can calculate a different way but total volumes should be the same answer

1)



$1) 8 \times 8 \times 4 = 256 \text{ cm}^3$

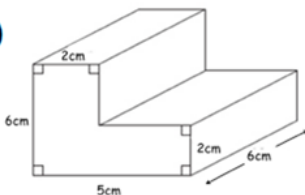
$6 \times 3 \times 8 = 144 \text{ cm}^3$

$256 + 144 = 400 \text{ cm}^3$

Extension

The volume of the shape below is 195 cm^3 .
Can you find the value of x ?

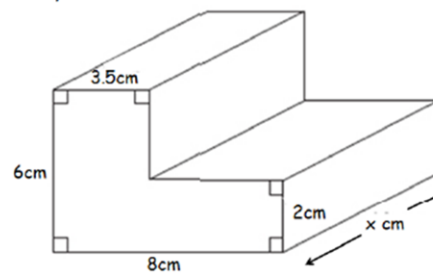
2)



$2) 2 \times 6 \times 6 = 72 \text{ cm}^3$

$2 \times 6 \times 3 = 36 \text{ cm}^3$

$72 + 36 = 108 \text{ cm}^3$



$3.5 \times 6 = 21 \text{ cm}^3$

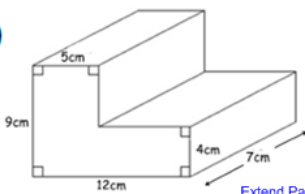
$4.5 \times 2 = 9 \text{ cm}^3$

$21 + 9 = 30 \text{ cm}^3$

$195 / 30 = 6.5 \text{ cm}$

$x = 6.5 \text{ cm}$

3)



$3) 5 \times 9 \times 7 = 315 \text{ cm}^3$

$7 \times 4 \times 7 = 196 \text{ cm}^3$

$315 + 196 = 511 \text{ cm}^3$

Extend Page

Wednesday

| | | | |
|---------------|------------------|-------------------|----------------------------|
| 1a 0.9 | 2) 1 cake | 1a ÷ | 3a 2,568 ml |
| b 7.7 | 3 eggs | b ×, 1,000 | b 3,999 ml |
| c 3.5 | 140 g | 2a 3.452 l | c 10,566 ml |
| d 112 | 140 g | b 7.895 l | d 1,780 ml |
| e 2.4 | 224 g | c 10 l | e 7,305 ml |
| f 7.2 | 112 g | d 12.674 l | f 350 ml |
| g 44 | 2 cakes | e 56.78 l | 4a 10 |
| h 12.6 | 6 | f 0.235 l | b 1.625 l, 1.250 l |
| | 280 g | | c 5 glasses, 125 ml |
| | 280 g | | d 4.750 l, 19 cups |
| | 448 g | | |
| | 224 g | | |

Extension

7 125; 125; 15; 250

30 x 125 ml = 3750 ml or 3.75 l pineapple juice

30 x 125 = 3750 ml or 3.75 l cream

1/2 x 30 = 15 bananas

15 x 30 = 450 ml coconut cream

4 x 30 = 120 strawberries

1 x 30 = 30 cups of ice

Thursday

1a 6.6

b 7.5

c 9.1

d 2

e 2.4

f 91.5

g 0.8

h 3.2

1a 14, 1.4

b 28, 2.8

c 42, 4.2

d 69, 6.9

2a 20

b 40.5

c 823.8

d 200

e 1,900

f 45,000

3a 4

b 0.28

c 3.25

d 4.82

e 1.23

f 7.777

g 4.341

h 1.87

i 0.198



4c 325 mm, 300 cm, 3.25 m

5 metres: 52.67; 0.003

centimetres: 9.5, 751.3; 0.3; 12.7

millimetres: 2,570; 52,670; 127

Extension

a) $10\text{km} \div 56 \text{ minutes} = 0.17 = \mathbf{0.2 \text{ km per minute}}$

b) $10 \text{ km} \div 1.6 = 6.25 \text{ miles}$ $6.25 \text{ miles} \div 56 \text{ minutes} = 0.11 = \mathbf{0.1 \text{ miles per minute}}$