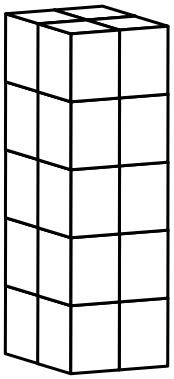
Calculating and Estimating Volume

I can estimate and calculate the volume of cubes and cuboids.

1. Calculate the volume of these shapes.

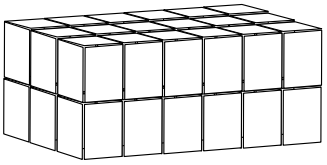
a)



Each small cube is a cubic centimetre.

volume = cm^3

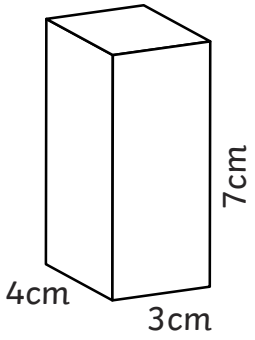
b)



Each small cube is a cubic metre.

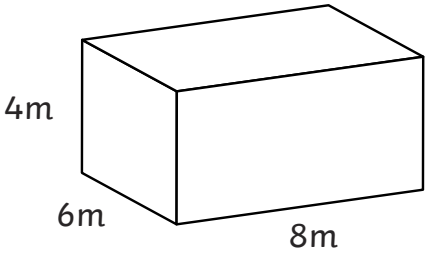
volume = m^3

c)



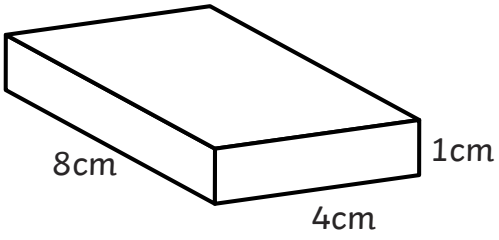
volume = cm^3

d)



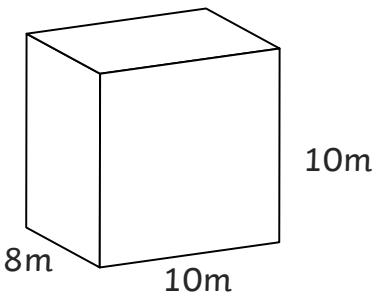
volume = m^3

e)



volume = cm^3

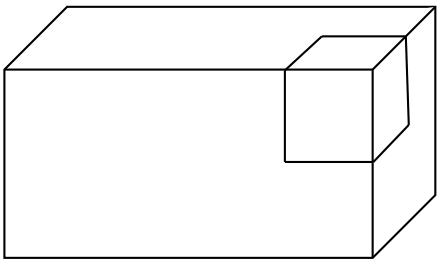
f)



volume = m^3

2. Estimate the volume of these shapes.

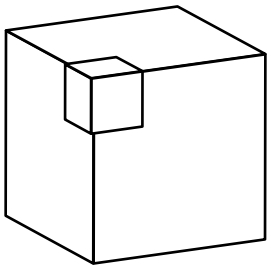
a)



Small cube = 1 cubic centimetre

Estimation =

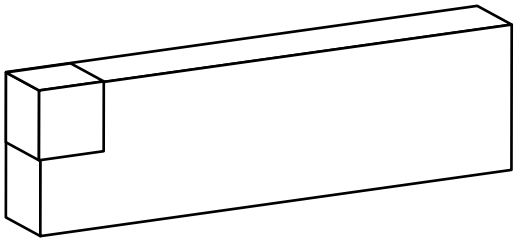
b)



Small cube = 1 cubic metre

Estimation =

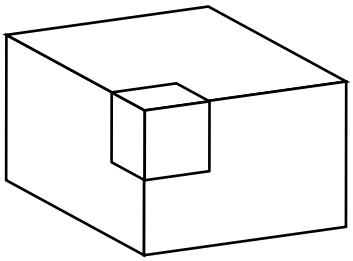
c)



Small cube = 1 cubic metre

Estimation =

d)



Small cube = 1 cubic metre

Estimation =

3. The volume of a cuboid is 36cm^3. The height of the cuboid is 6cm and the width is 2cm. What is the measurement of the other side?

4. A cuboid has a volume of 60cm^3. Place a tick by all the dimensions which the cuboid could be.

12cm × 3cm × 4cm		10cm × 3cm × 2cm	
20cm × 3cm × 1cm		5cm × 6cm × 2cm	
6cm × 2cm × 2cm		8cm × 3cm × 2cm	

Calculating and Estimating Volume **Answers**

1. Calculate the volume of these shapes.

   a. $20cm^3$ d. $192m^3$

   b. $36m^3$ e. $32cm^3$

   c. $84cm^3$ f. $800m^3$

2. Estimate the volume of these shapes.

   a. $16cm^3$

   b. $27m^3$

   c. $14cm^3$

   d. $24m^3$

3. The volume of a cuboid is $36cm^3$. The height of the cuboid is 6cm and the width is 2cm. What is the measurement of the other side?
   3cm

4. A cuboid has a volume of $60cm^3$. Place a tick by all the dimensions which the cuboid could be.

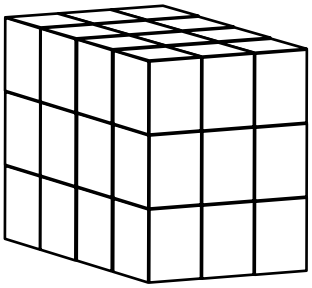
12cm × 3cm × 4cm		10cm × 3cm × 2cm	✓
20cm × 3cm × 1cm	✓	5cm × 6cm × 2cm	✓
6cm × 2cm × 2cm		8cm × 3cm × 2cm	

Calculating and Estimating Volume

I can estimate and calculate the volume of cubes and cuboids.

1. Calculate the volume of these shapes.

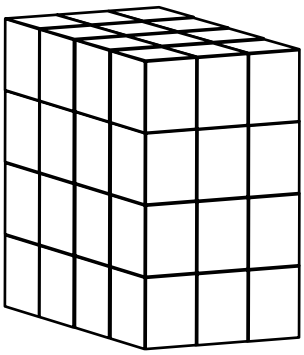
a)



Each small cube is a cubic centimetre.

volume = cm^3

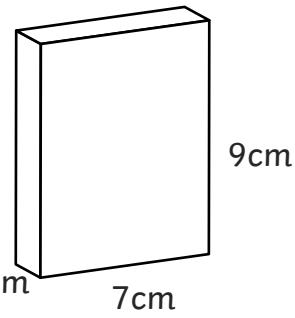
b)



Each small cube is a cubic metre.

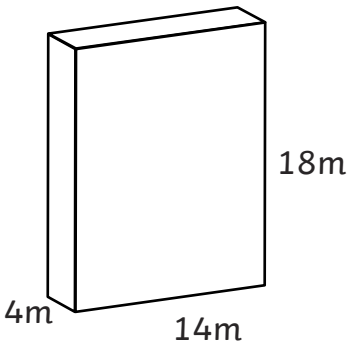
volume = m^3

c)



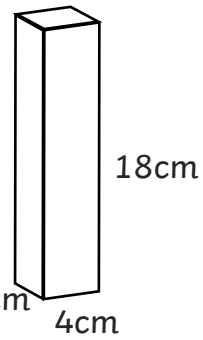
volume =

d)



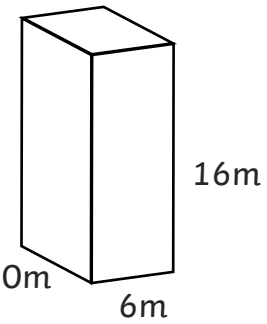
volume =

e)



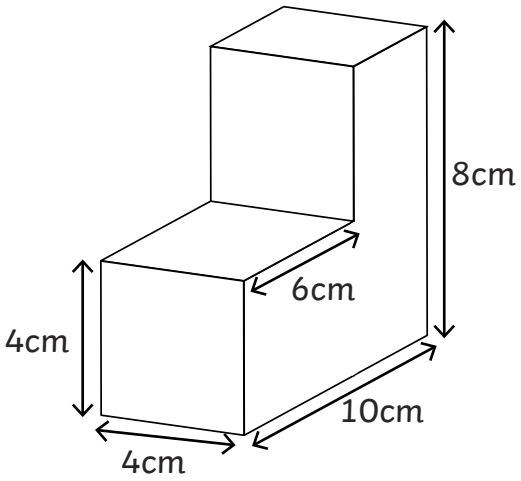
volume =

f)



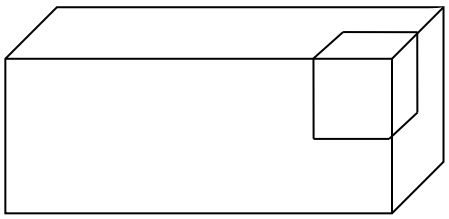
volume =

2. Calculate the area of this composite shape.



3. Estimate the volume of these shapes.

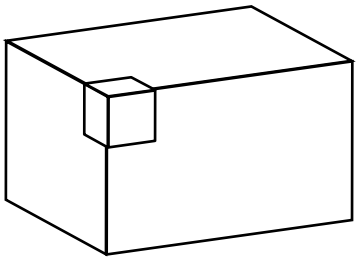
a)



Small cube = 1 cubic centimetre

Estimation =

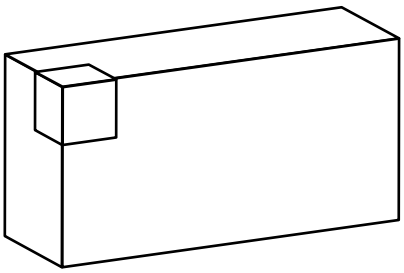
b)



Small cube = 1 cubic metre

Estimation =

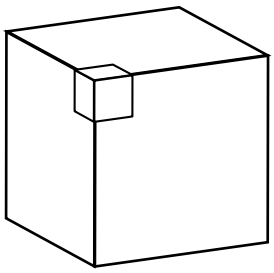
c)



Small cube = 1 cubic centimetre

Estimation =

d)



Small cube = 1 cubic metre

Estimation =

4. The volume of a cuboid is 72cm^3. The area of the base is 9cm^2. What is the height of the shape?

Calculating and Estimating Volume **Answers**

1. Calculate the volume of these shapes.

   a. $36cm^3$

   b. $48m^3$

   c. $126cm^3$

   d. $1008m^3$

   e. $288cm^3$

   f. $960m^3$

2. Calculate the area of this composite shape.
   $224cm^3$

3. Estimate the volume of these shapes.

   a. $20cm^3$

   b. $60m^3$

   c. $36m^3$

   d. $64m^3$

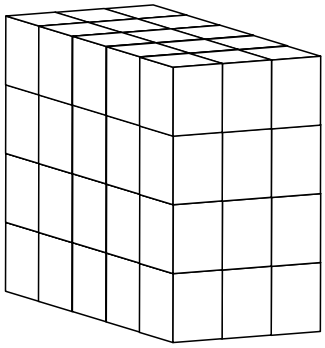
4. The volume of a cuboid is $72cm^3$. The area of the base is $9cm^2$. What is the height of the shape?
   $8cm$

Calculating and Estimating Volume

I can estimate and calculate the volume of cubes and cuboids.

1. Calculate the volume of these shapes.

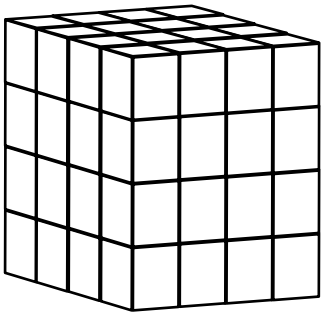
a)



Each small cube is a cubic centimetre.

volume =

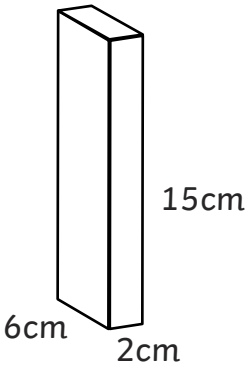
b)



Each small cube is a cubic metre.

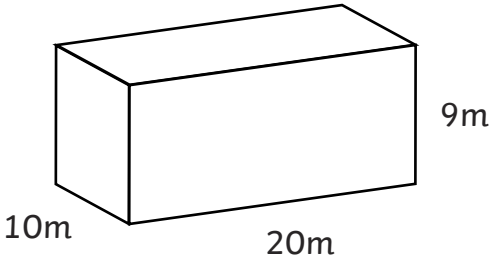
volume =

c)



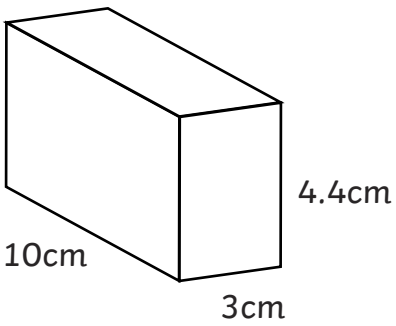
volume =

d)



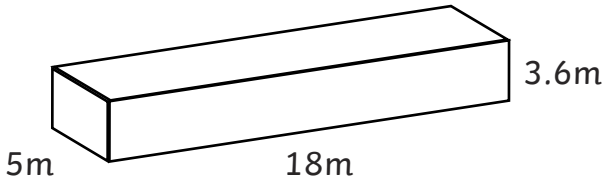
volume =

e)



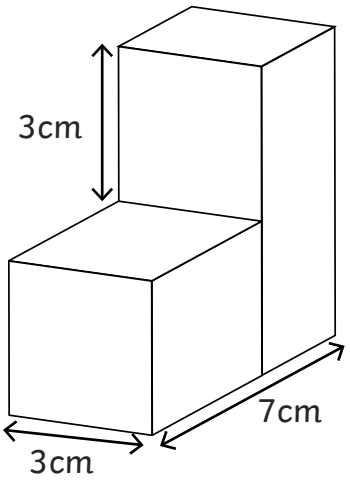
volume =

f)



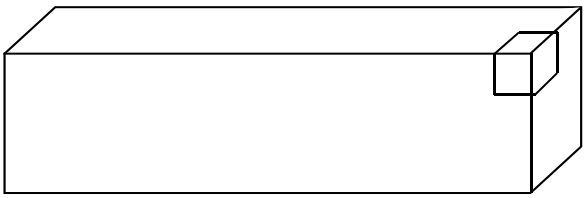
volume =

2. Calculate the area of this composite shape. The shape is made up of a cube and a cuboid.



3. Estimate the volume of these shapes.

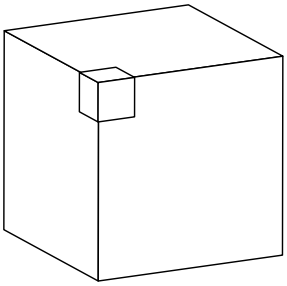
a)



Small cube = 1 cubic centimetre

Estimation =

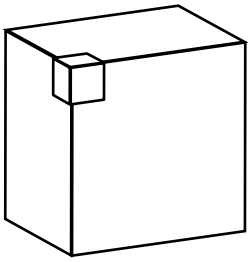
b)



Small cube = 1 cubic metre

Estimation =

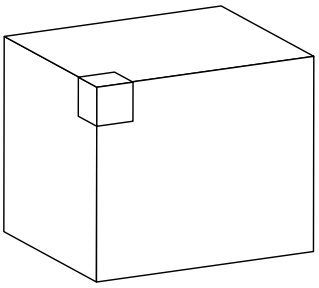
c)



Small cube = 1 cubic metre

Estimation =

d)



Small cube = 1 cubic metre

Estimation =

4. Find all the cuboids that have a volume of 96cm^3, where one of the dimensions is 8cm.

Calculating and Estimating Volume **Answers**

1. Calculate the volume of these shapes.

   a. $60cm^3$

   b. $64m^3$

   c. $180cm^3$

   d. $1800m^3$

   e. $132cm^3$

   f. $324m^3$

2. Calculate the area of this composite shape.
   $99cm^3$

3. Estimate the volume of these shapes.

   a. $72cm^3$

   b. $125m^3$

   c. $48m^3$

   d. $150m^3$

4. Find all the cuboids that have a volume of $96cm^3$, where one of the dimensions is 8cm.
   8cm × 12cm × 1cm
   8cm × 6cm × 2cm
   8cm × 4cm × 3cm