Y5/6 Measures and Data Unit 4 (56618)

Additional teacher instructions for practice sheets

These notes indicate which practice sheets are most appropriate for which groups.

Day 1 Y5 Finding volumes Sheet 1
Working towards ARE / Working at ARE / Greater Depth
Working towards ARE make 3 cuboids using centimetre cubes and find their volumes.

Day 1 Y6 Finding volumes of cuboids Sheet 2
Working towards ARE

Day 1 Y6 Finding volumes of cuboids Sheet 3
Working at ARE / Greater Depth

Day 2 Y5 Find volumes of cuboids Sheet 1
Working towards ARE / Working at ARE / Greater Depth

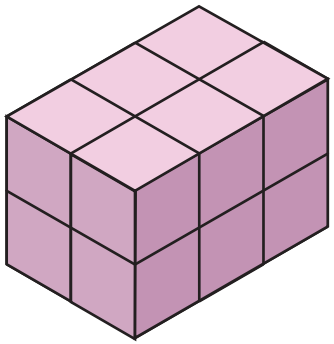
Day 2 Y6 Missing edges Sheet 2
Working towards ARE

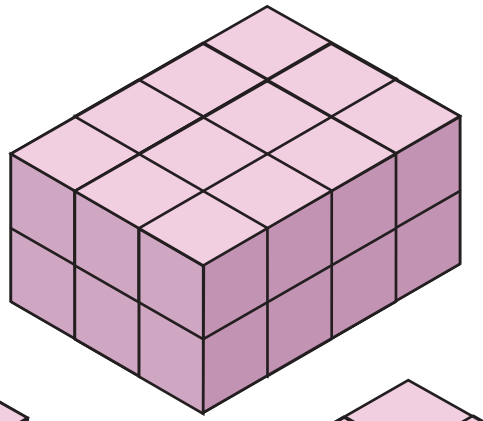
Day 2 Y6 Missing edges Sheet 3
Working at ARE / Greater Depth

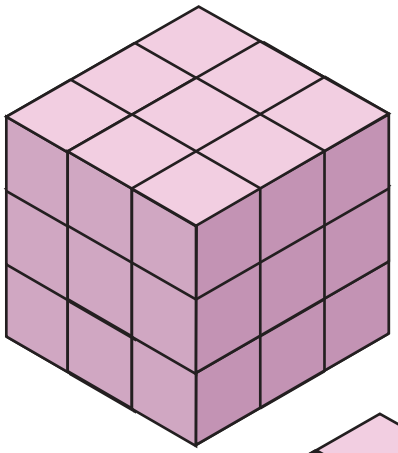
Finding volumes

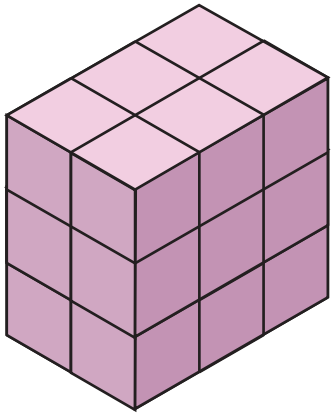
Sheet 1

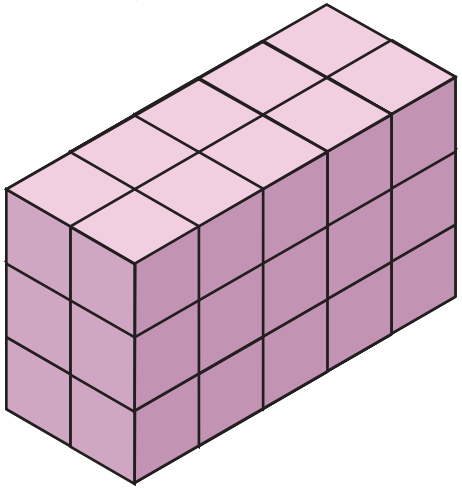
These cuboids are made from centimetre cubes. Work out the volume for each in cm^3.

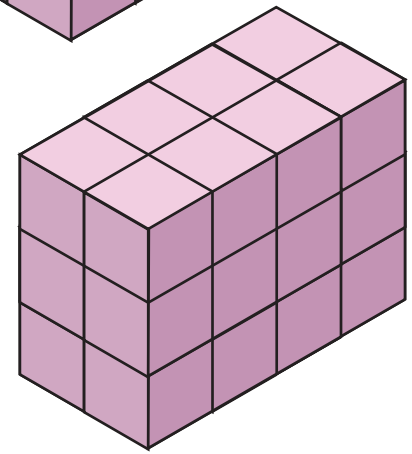


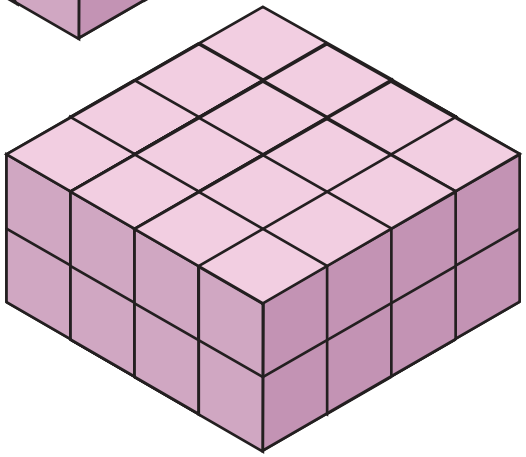










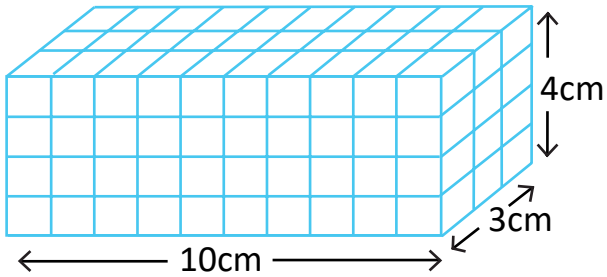


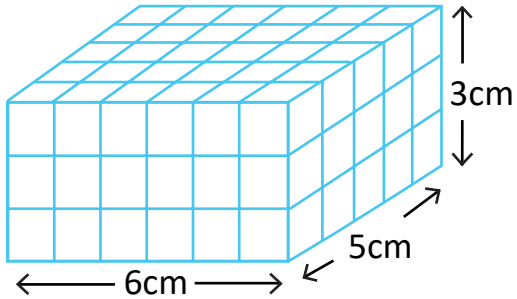
Challenge

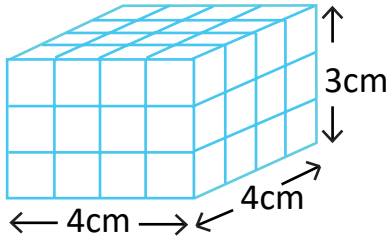
Sort these units. Some can be used to measure perimeter, some can be used to measure area and some to measure volume.:
cm, m^2, km^3, mm^2, cm^3, m, km^2, cm^2
Write some other units in each set.

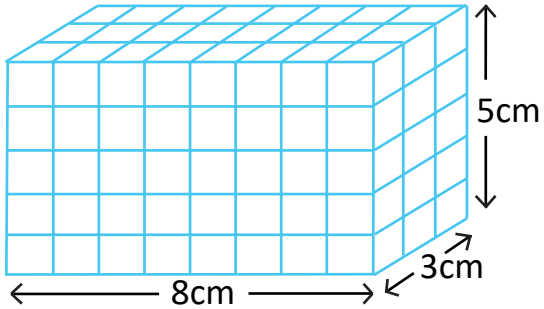
Finding volumes of cuboids

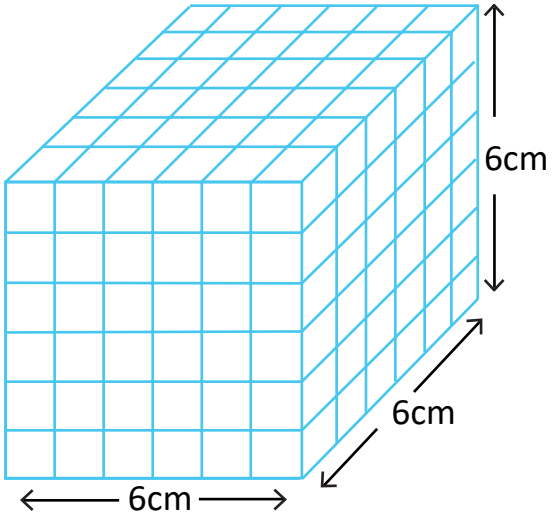
Sheet 2

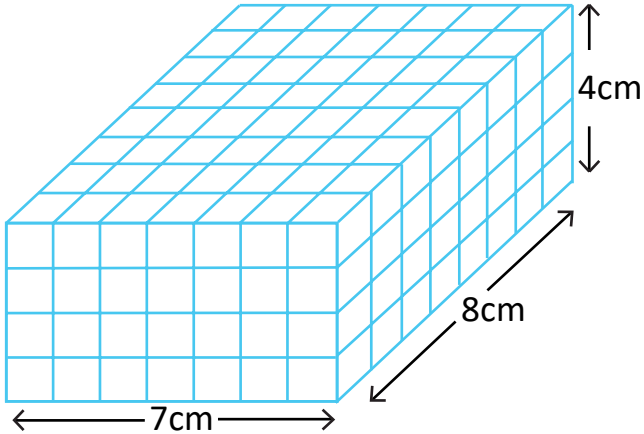












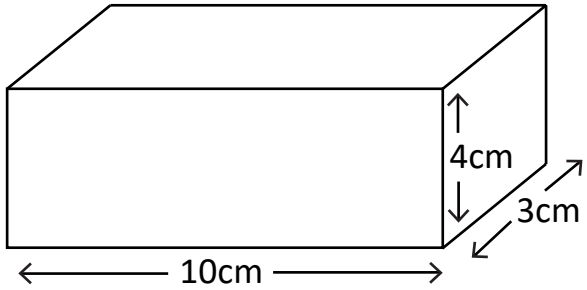
Challenge

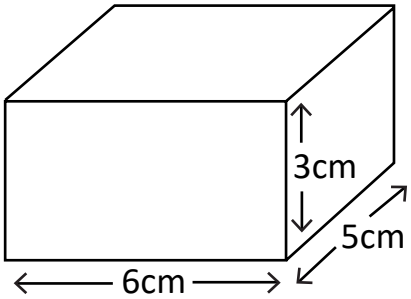
Make a set of cuboids with a volume of 36cm³.

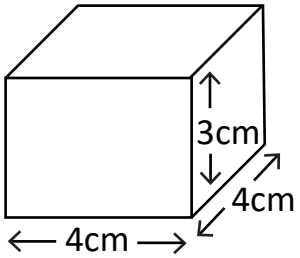
HINT: Don't forget that one of the edges could be just 1cm long...

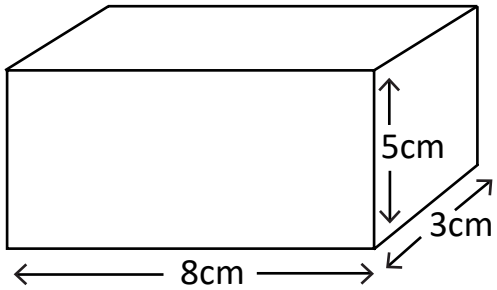
Finding volumes of cuboids

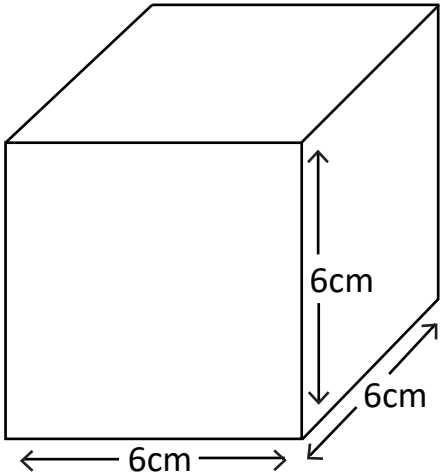
Sheet 3

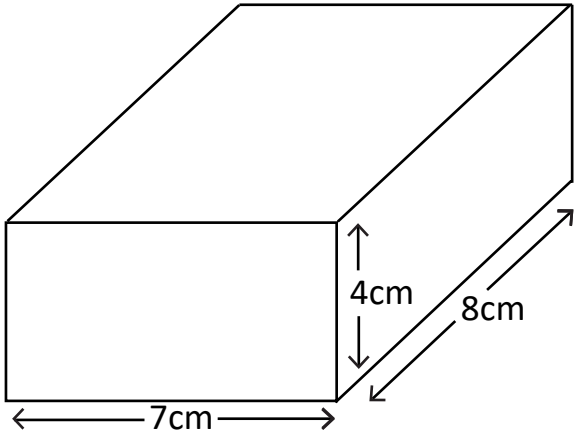










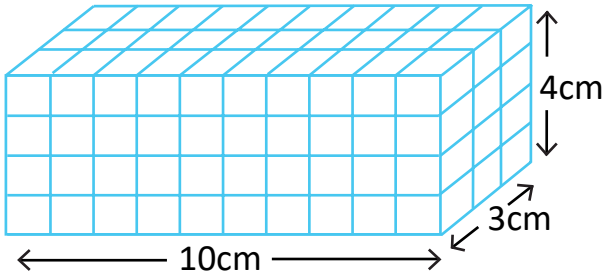


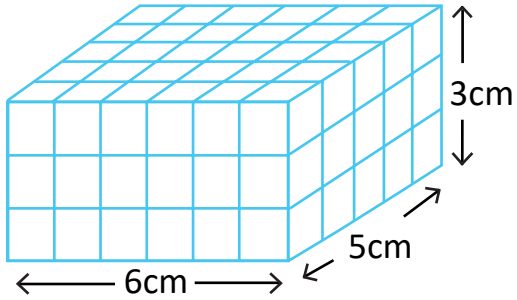
Challenge

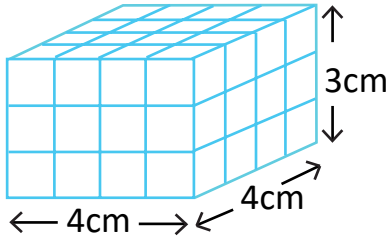
Sketch your own cuboids with a volume of 36 cm³. Note the dimensions of each.

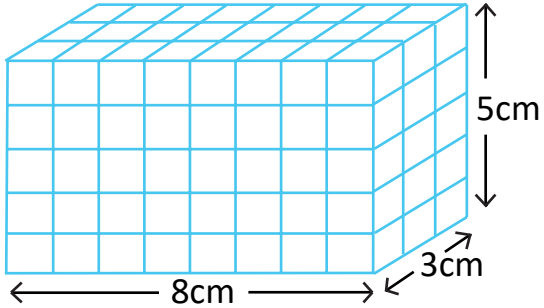
Find volumes of cuboids

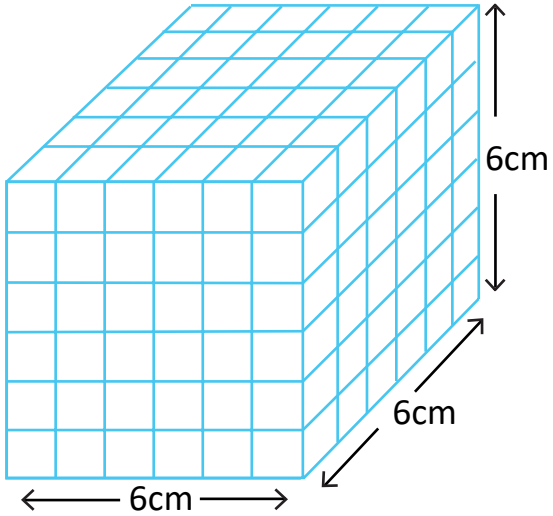
Sheet 1

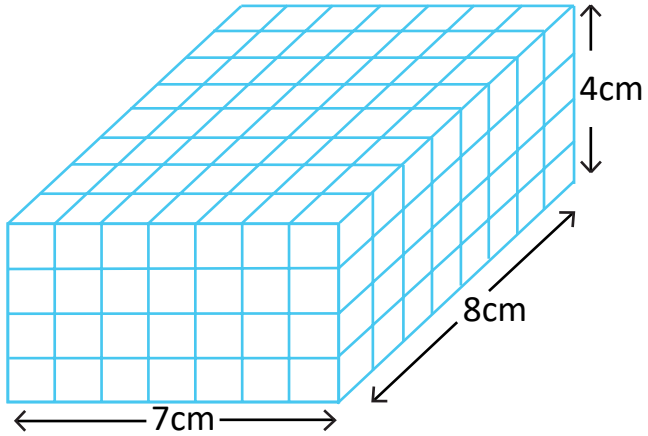










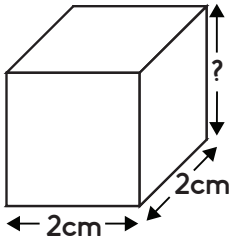


Sketch your own cuboid with a volume of 24cm^3.

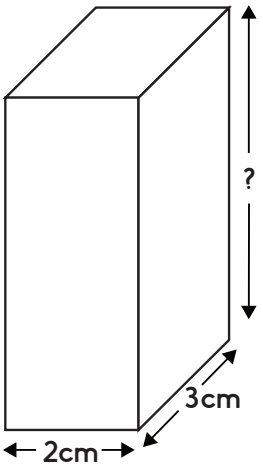
Missing edges

Sheet 2

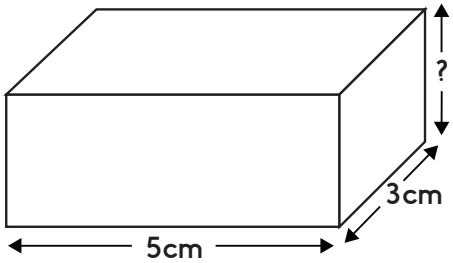
Work out the length of the missing edges of these cuboids.



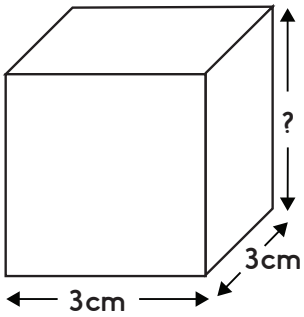
Volume 8 cm³



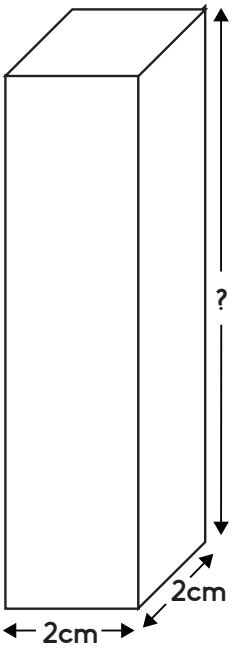
Volume 30 cm³



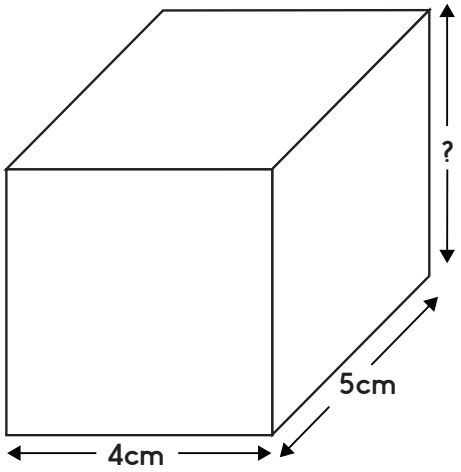
Volume 30 cm³



Volume 27 cm³



Volume 36 cm³



Volume 80 cm³

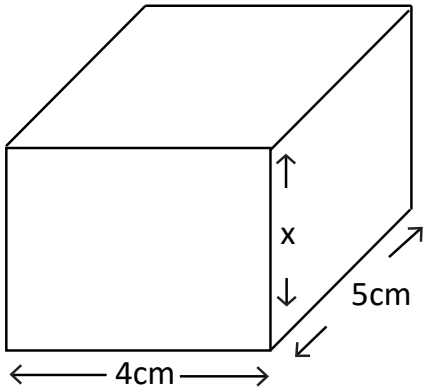
Challenge

Draw two or more 'missing edge' cuboids. Ask a friend to calculate the missing lengths.

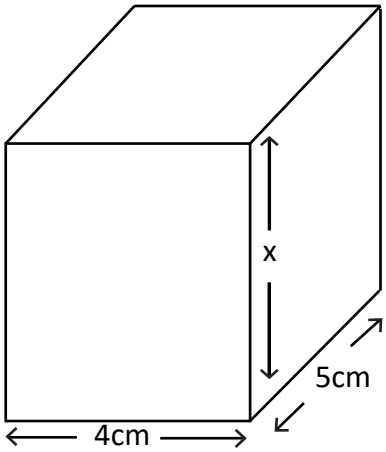
Missing edges

Sheet 3

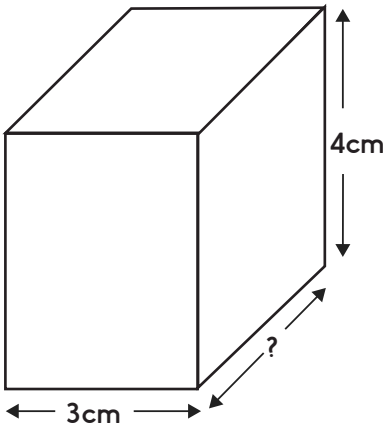
Work out the length of the missing edges of these cuboids.



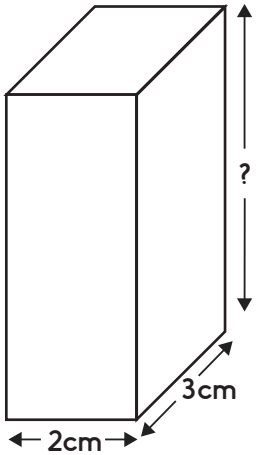
Volume 60 cm³



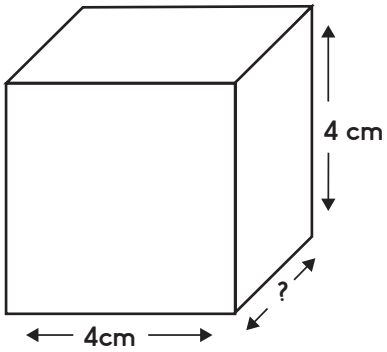
Volume 120 cm³



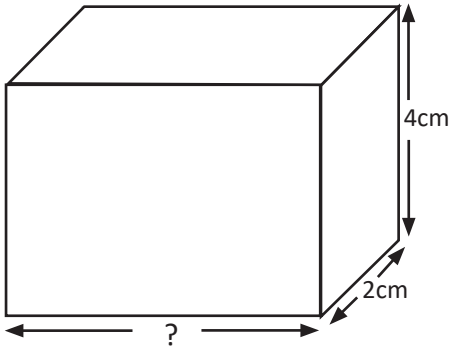
Volume 48 cm³



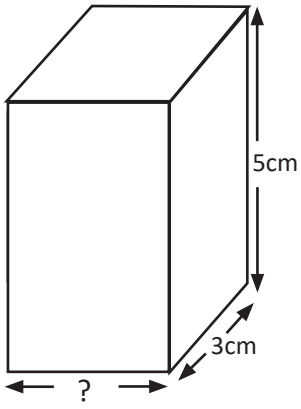
Volume 30 cm³



Volume 64 cm³



Volume 48 cm³



Volume 45 cm³

Measures and data

Answers

Day 1 Y5 Finding volumes Sheet 1

2 × 3 × 2 = 12 cm^3
3 × 4 × 2 = 24 cm^3
3 × 3 × 3 = 27 cm^3
2 × 3 × 3 = 18 cm^3
2 × 5 × 3 = 30 cm^3
2 × 4 × 3 = 24 cm^3
4 × 4 × 2 = 32 cm^3

Challenge

Perimeter: cm, m also km, mm
Area: m^2, mm^2, km^2, cm^2
Volume: km^3, cm^3 also mm^3, m^3

Day 1 Y6 Finding volumes of cuboids Sheets 2 and 3

10cm x 3cm x 4cm = 120cm^2
6cm x 5cm x 3cm = 90cm^2
4cm x 4cm x 3cm = 48cm^2
8cm x 3cm x 5cm = 120cm^2
6cm x 6cm x 6cm = 216cm^2
7cm x 8cm x 4cm = 224cm^2

Challenge

Cuboids could have dimensions as follows:
1 x 1 x 36cm 2 x 2 x 9cm 3 x 3 x 4cm
1 x 2 x 18cm 2 x 3 x 6cm
1 x 3 x 12cm
1 x 4 x 9cm
1 x 6 x 6cm

Day 2 Y5 Find volumes of cuboids Sheets 1

10cm x 3cm x 4cm = 120cm^2
6cm x 5cm x 3cm = 90cm^2
4cm x 4cm x 3cm = 48cm^2
8cm x 3cm x 5cm = 120cm^2
6cm x 6cm x 6cm = 216cm^2
7cm x 8cm x 4cm = 224cm^2

Challenge

Cuboids could have dimensions as follows:
1 x 1 x 24cm 2 x 2 x 6cm
1 x 2 x 12cm 2 x 3 x 4cm
1 x 3 x 8cm
1 x 4 x 6cm

Measures and data

Answers

Day 2 Y6 Missing edges Sheet 2

Volume 8cm^2	Edges are: 2 x 2 x 2cm
Volume 30cm^2	Edges are: 2 x 3 x 5cm
Volume 30cm^2	Edges are: 5 x 3 x 2cm
Volume 27cm^2	Edges are: 3 x 3 x 3cm
Volume 36cm^2	Edges are: 2 x 2 x 9cm
Volume 80cm^2	Edges are: 4 x 5 x 4cm

Day 2 Y6 Missing edges Sheet 3

Volume 60cm^2	Edges are: 4 x 5 x 3cm
Volume 120cm^2	Edges are: 4 x 5 x 6cm
Volume 48cm^2	Edges are: 3 x 4 x 4cm
Volume 30cm^2	Edges are: 2 x 3 x 5cm
Volume 64cm^2	Edges are: 4 x 4 x 4cm
Volume 48cm^2	Edges are: 2 x 4 x 6cm
Volume 45cm^2	Edges are: 3 x 5 x 3cm