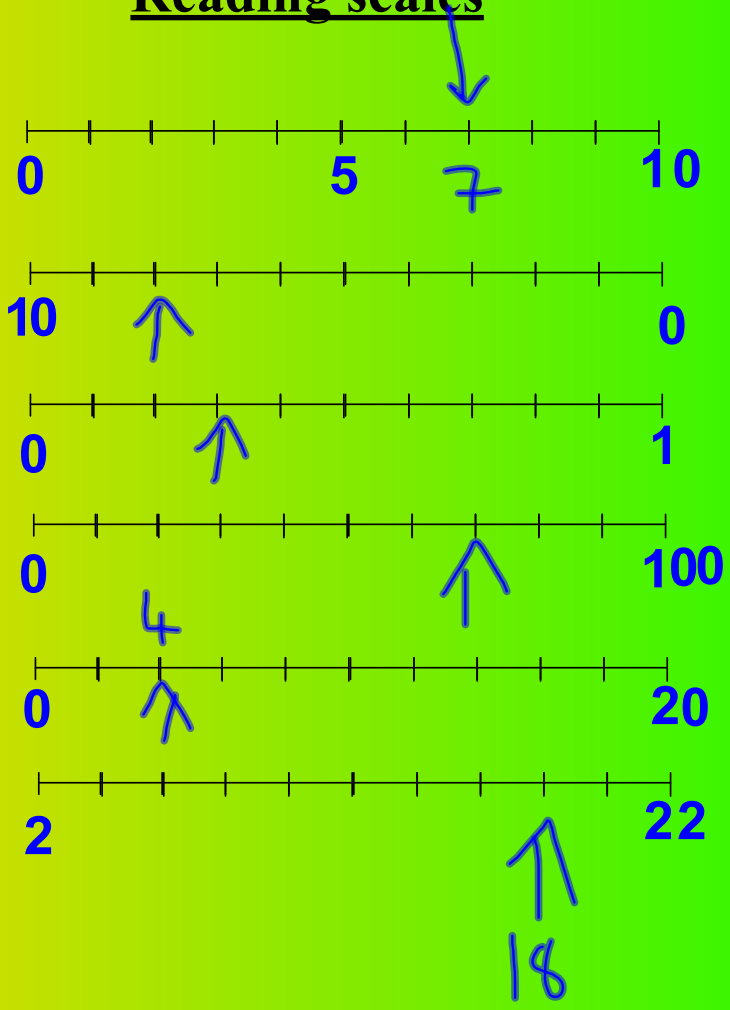
Space, shape and Measures 2

virtual image, numeracy lesson starters, menu 5, capacity

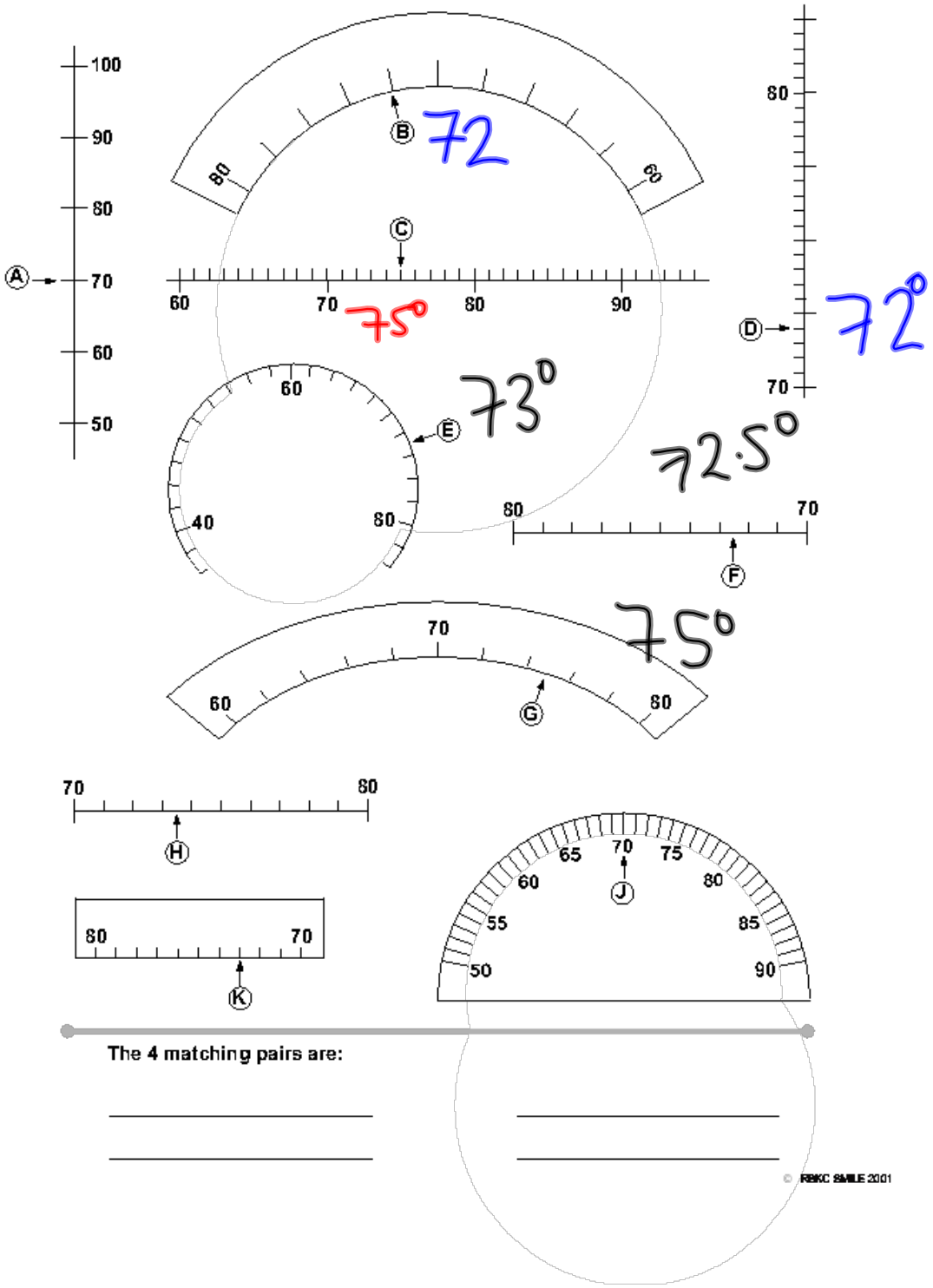
Reading scales



Estimating worksheet www, mathematical starters

Matching Pairs

Some of the scales below have the same readings. Find 4 pairs.



Measuring Time.

Estimating 30 seconds

quiz

bus timetable

Units for measuring:

1. Length

metric	imperial
kilometres	miles
metres	yards
centimetres	feet
millimetres	inches

2. Weight

metric	imperial
tonnes	tons
kilograms	stones
grams	pounds
	ounces

3. Volume

metric	imperial
litres	gallon
millilitres	pints
	fluid ounce

Units to measure length:

metric	imperial

Converting between metric and Imperial Units

common conversions: for length:

100cm = 1m

10mm = 1cm

1000m = km

2.5cm = 1inch

Estimate the height of
Actual:

Estimate the length of
Actual:

Estimate the diameter of
Actual:

Units to measure weight:

metric	imperial

common conversions: for weight

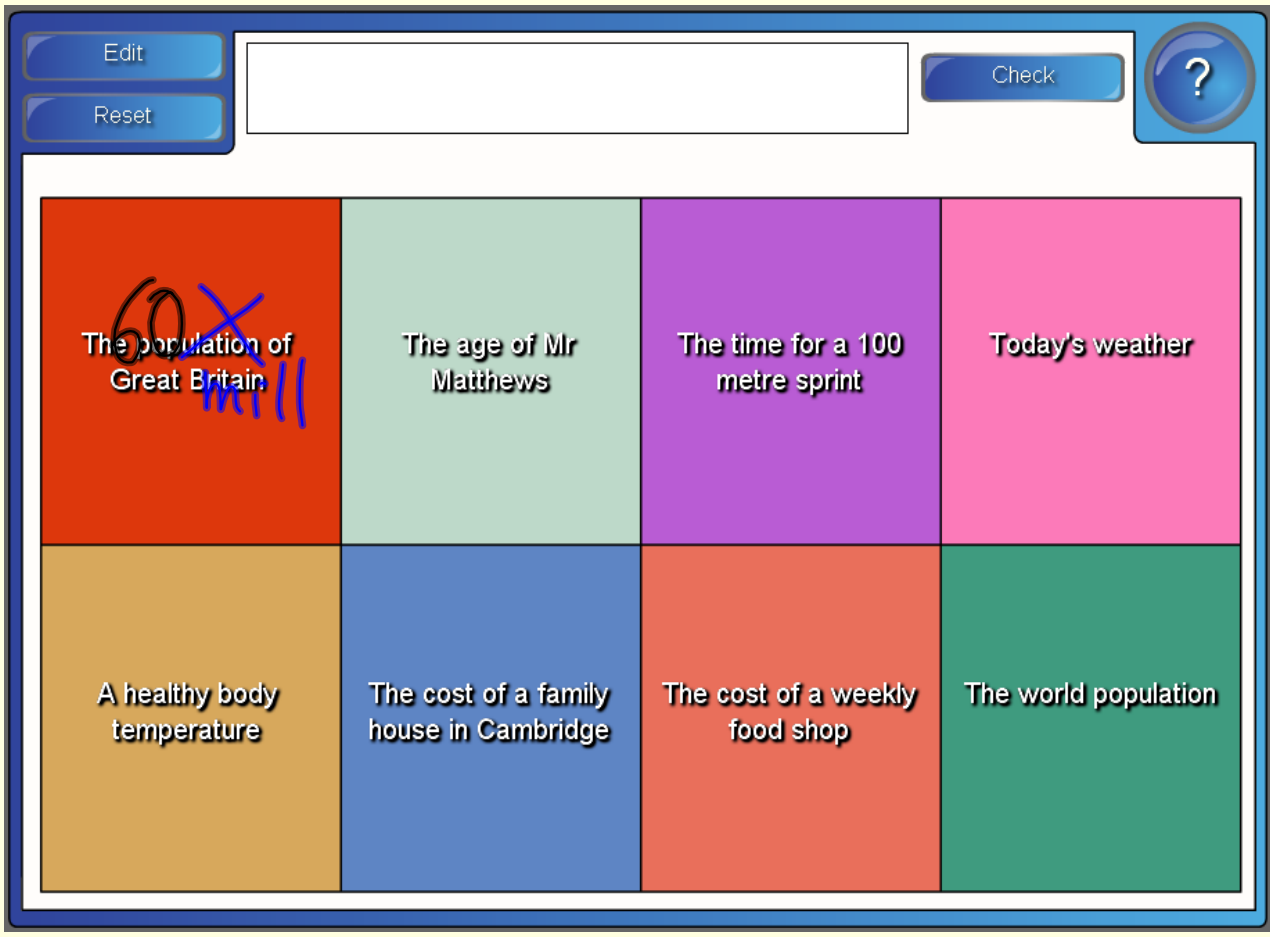
two and a quarter pounds of Jam
weigh about a kilogram

Estimate the weight of myself : 50kg
Actual:

Estimate the weight of: textbook : 20kg
Actual:

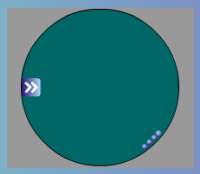
Estimate the weight of: chair : 5g
Actual:

Can you estimate:



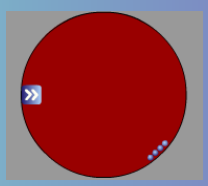
Estimate the distance from Cambridge to...

Ely

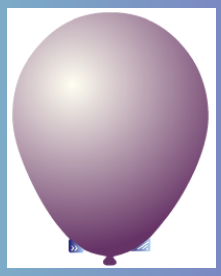


London

Edinburgh



Paris



Singapore

Cambridge	to...

Estimate the length of..

your little finger

your pencil

your desk

you

the door

Money!

Estimate the cost of :

a small house for a family of four

a library of books

A week's food for a family of four

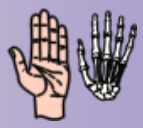
a goal post for rugby

the salary of a shopworker

Which of these has bigger area? Put them in order starting with the smallest.

My poster

Your hand



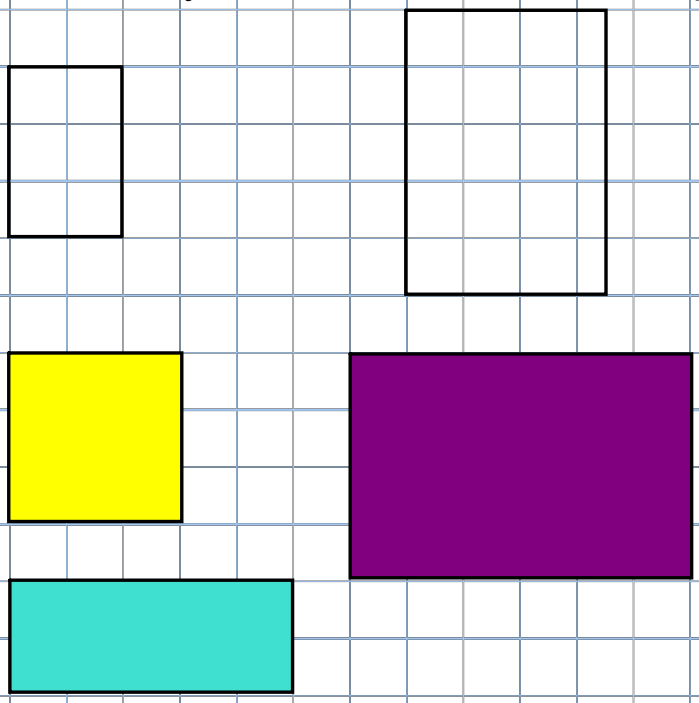
The classroom door

Your exercise book

A football field

A bicycle wheel

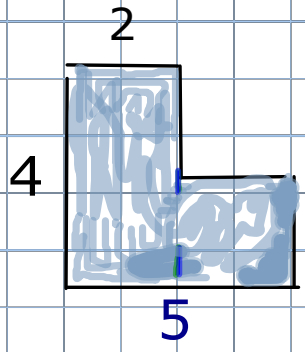
How would you find the area of this shape?



Area of a rectangle means

Perimeter of a rectangle means

Area of compound shapes



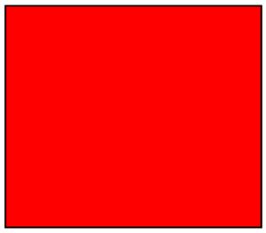
Make up a shape from rectangles with area 20cm^2.
Ask a friend to check it.

Area

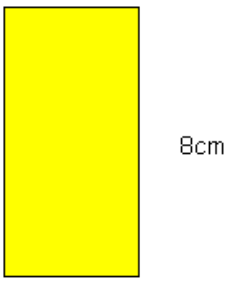
Focus: To calculate the area of regular and irregular shapes.

Draw these shapes in your book and calculate the area of them. Use your squared paper.

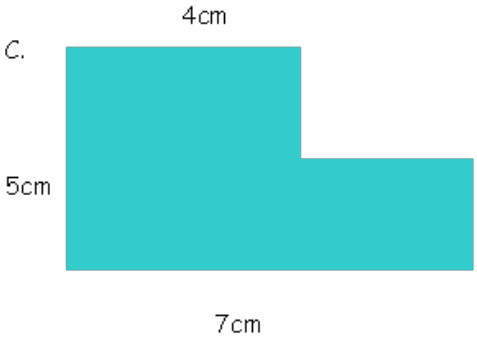
A.



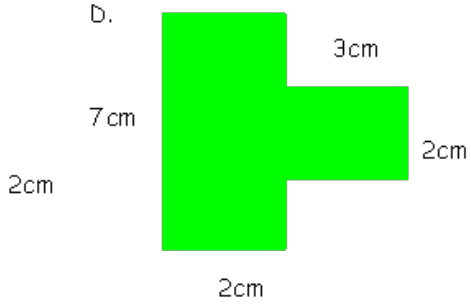
B.



C.



D.



A =

B =

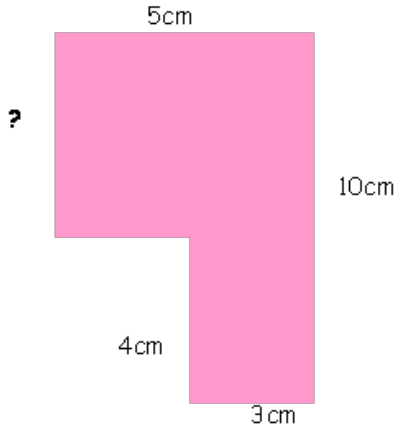
Total Area = A+B=

A =

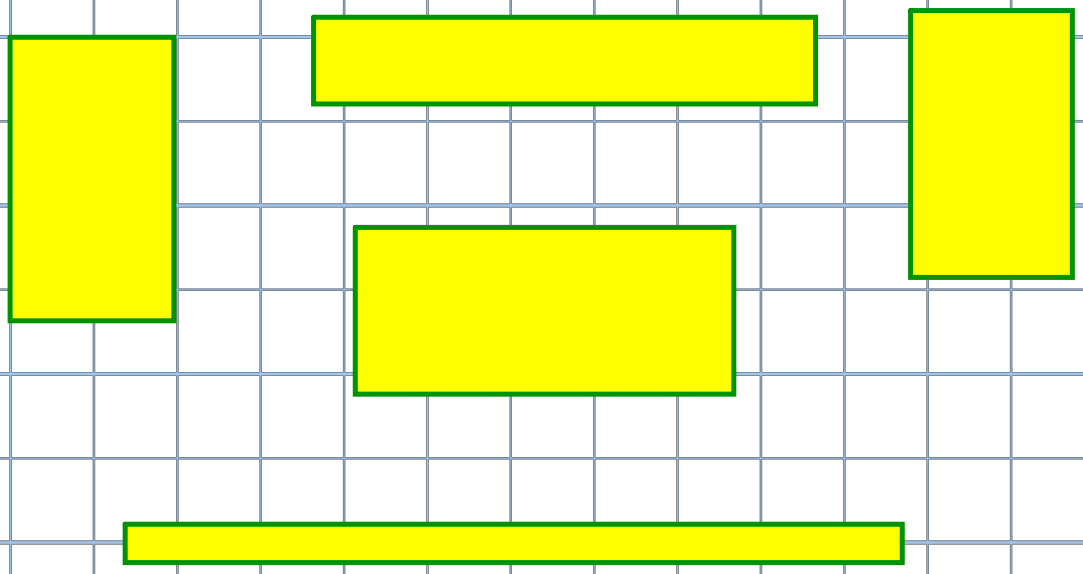
B =

Total Area =

E.

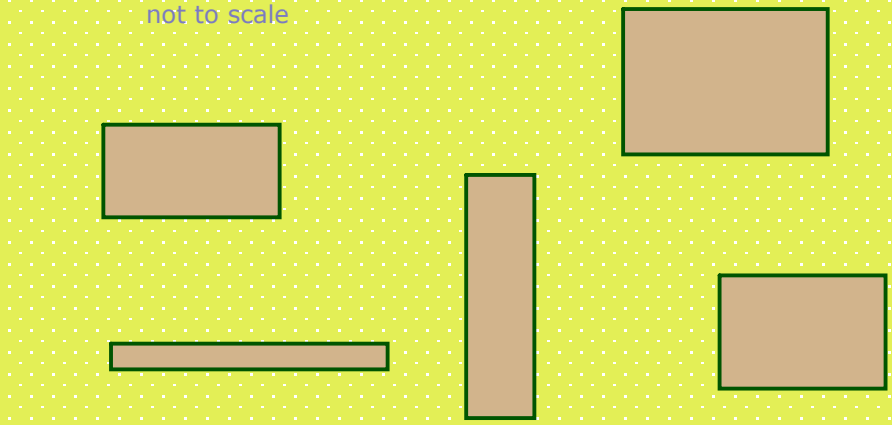


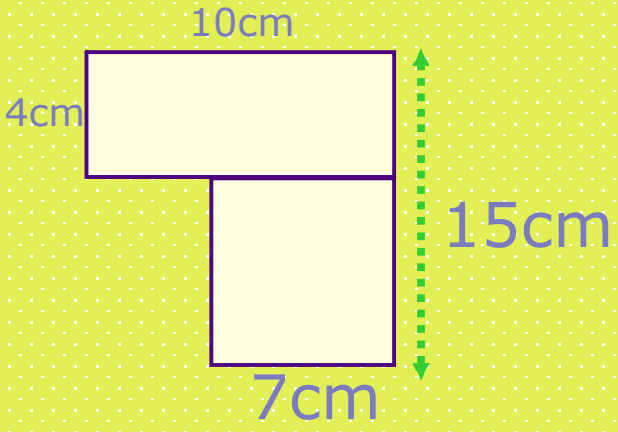
Draw 5 rectangles with area 12cm squared.



Draw 5 rectangles with area $30cm^2$

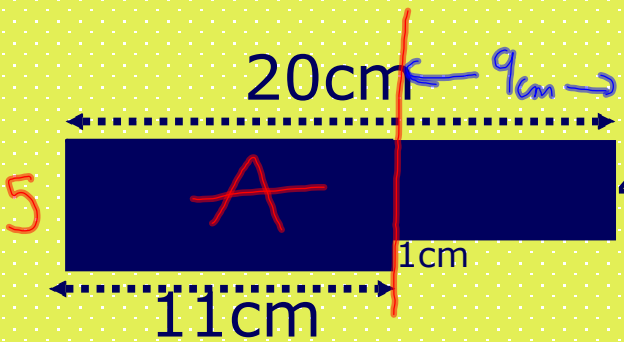
not to scale





A: $55cm^2$

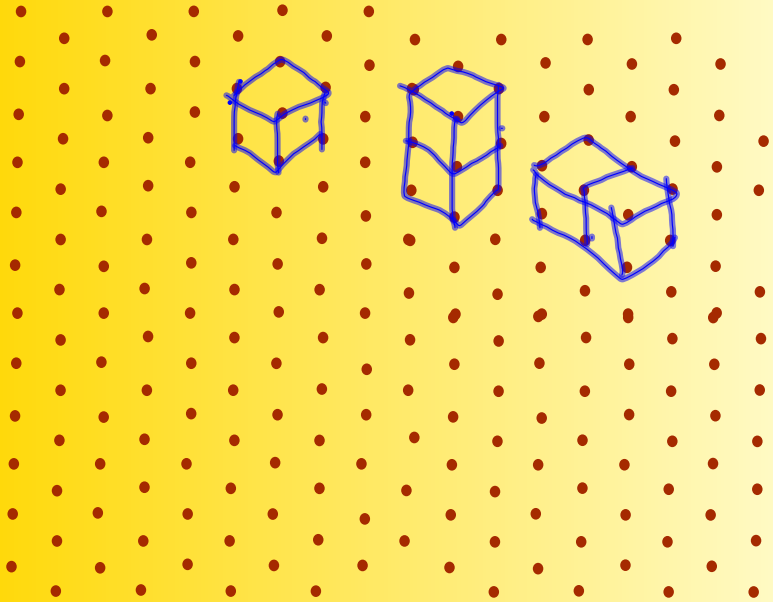
B: $9 \times 4 = 36$



A + B = 55
36
$91cm^2$

Drawing 3D shapes

Hint: make sure your paper is the right way up!



Draw as many 3D models as you can with 4 cubes.

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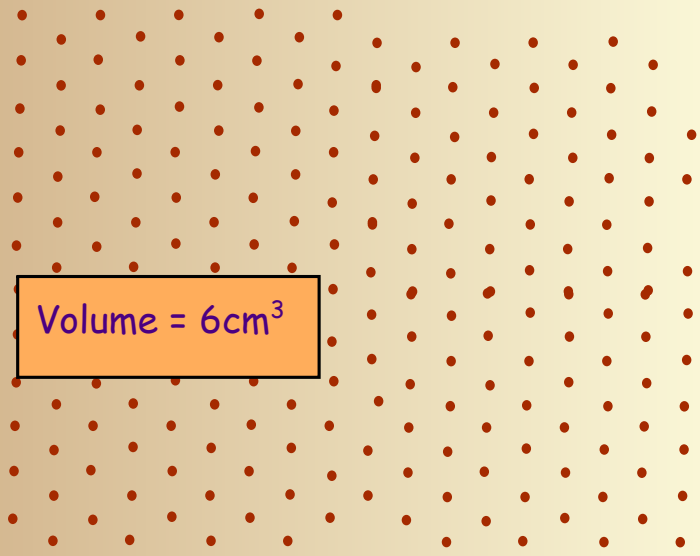
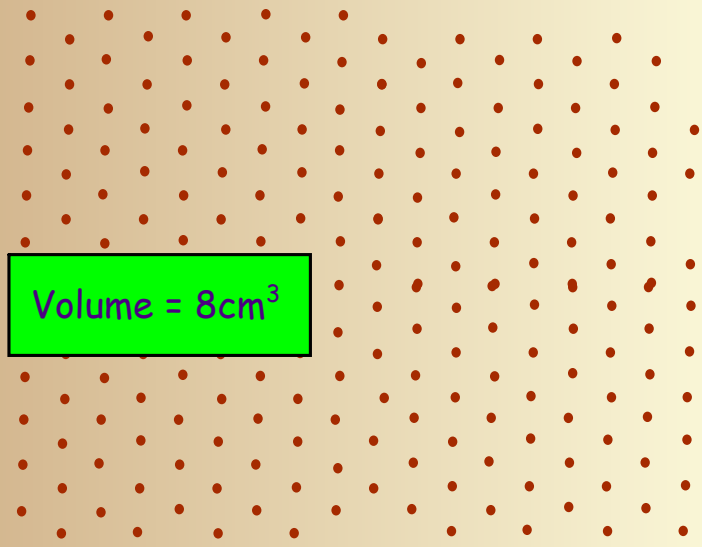
Make a cuboid with 6 cubes.
Draw it.
Now make a different one and draw it.



Make a cuboid with 8 cubes.
Draw it.
Now make a different one and draw it.

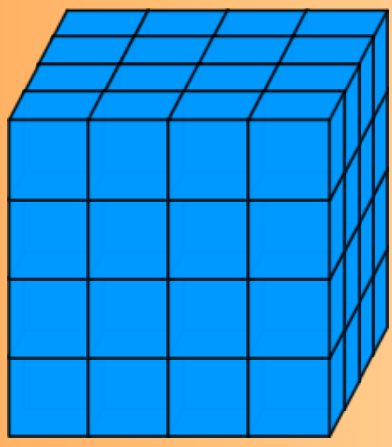


Make cuboids with volume 12cm^3 and draw them.
(There are loads of different ones)

Homework
Page 206 qu 1,3,5,7

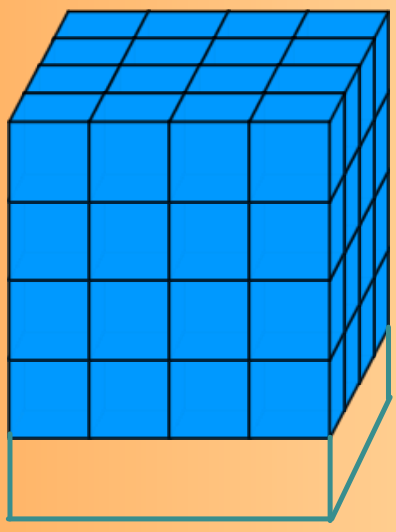
For Tuesday

Volume



Volume=

$16 \times 4 = 64\ cm^3$

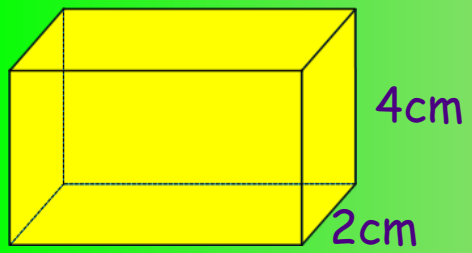


Volume=

	Volume
Green (s)	
Green (L)	
D Gr (s)	
D gr (L)	
Orange (s)	
Orange (L)	
Blue	
Black	
White	
Red	
Brown	
yellow	
pink	

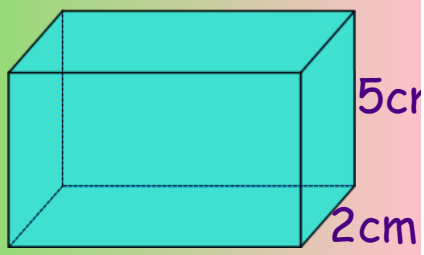
Finding the volume of cuboids

Volume of a cuboid = length x widthx height

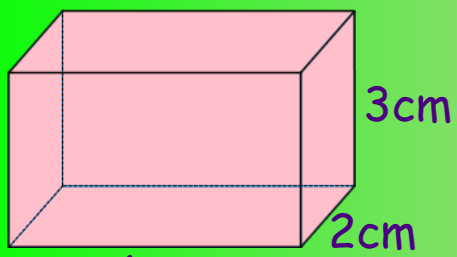


Volume =

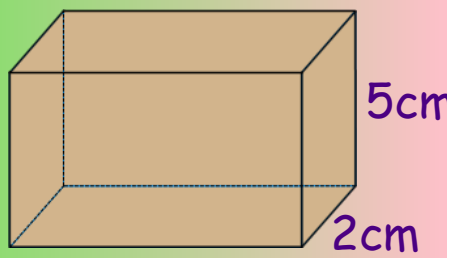
2)



Volume =



Volume =



Volume =

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A cuboid has volume $20cm^3$.
What dimensions might it have?

• ·Use units of measurement to estimate, calculate and solve problems in everyday contexts involving length, area, volume, capacity, mass, time and angle; know rough metric equivalents of imperial measures in daily use (feet, miles, pounds, pints, gallons).
• ·Deduce and use formulae for the area of a triangle, parallelogram and trapezium; calculate areas of compound shapes made from rectangles and triangles.
• ·Know and use the formula for the volume of a cuboid; calculate volumes and surface areas of cuboids and shapes made from cuboids.
• ·Investigate in a range of contexts: measures.

Attachments

metric and imp units.ppt

area_compound_shapes.odt