

Level 3

PROMPT sheet

3/1 Place value

The position of the digit gives its size

thousands	hundreds	tens	units	.	tenths	hundredths
4	3	5	2	.	6	1

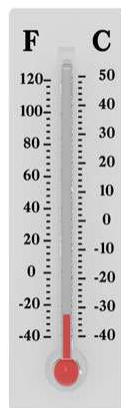
Example

The value of the digit '4' is 4000

The value of the digit '3' is 300

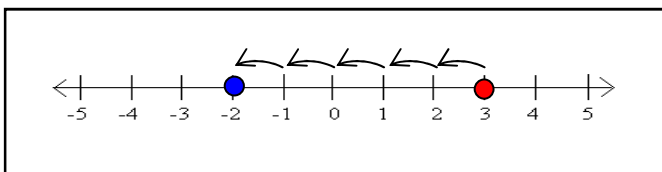
3/2 Recognise negative numbers

- These can be seen on a thermometer



The numbers below freezing (0°) are negative

- Number line to work out sums



$$3 - 5 = -2$$

3/3 Multiples

- Multiples are the number sequences that make up the tables

Example

The multiples of 2 are:

2 4 6 8 10 ...

The multiples of 5 are:

5 10 15 20 25 ...

The multiples of 10 are:

10 20 30 40 50 ...

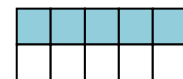
3/4 Fractions

$\frac{1}{2}$ ← numerator

← denominator

- This means 1 part out of every 2

Example 1



$$\frac{1}{2} =$$

$$\frac{5}{10}$$

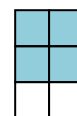
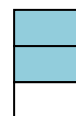
These fractions are all $\frac{1}{2}$

$$\frac{1}{2} \quad \frac{2}{4} \quad \frac{3}{6} \quad \frac{4}{8} \quad \frac{5}{10}$$

Example 2

$$\frac{2}{3}$$

- This means 2 part out of every 3



$$\frac{2}{3} =$$

$$\frac{4}{6}$$

3/5 Decimals

- Decimals and money

£3.00 means 300p

£3.50 means 350p

£3.05 means 305p

Remember

A calculator does not know if the numbers you put in are money so £3.50 will look like 3.5

- Ordering Decimals

1.23 m	1.6 m	1.65 m	1.3 m
↓	↓	↓	↓
1.23 m	1.60 m	1.65 m	1.30 m

Make the number of digits the same, it is easier to order them

Smallest $\xrightarrow{\hspace{10em}}$ Largest
1.23 m 1.30 m 1.60 m 1.65 m

3/6 Know the 3, 4 and 6 times tables

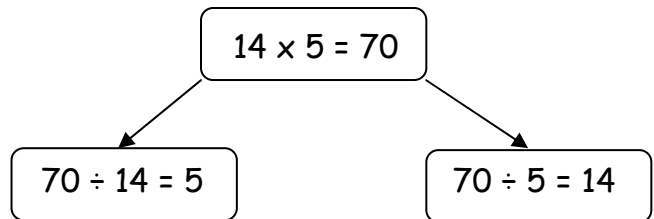
1 x 3 = 3
2 x 3 = 6
3 x 3 = 9
4 x 3 = 12
5 x 3 = 15
6 x 3 = 18
7 x 3 = 21
8 x 3 = 24
9 x 3 = 27
10 x 3 = 30

1 x 4 = 4
2 x 4 = 8
3 x 4 = 12
4 x 4 = 16
5 x 4 = 20
6 x 4 = 24
7 x 4 = 28
8 x 4 = 32
9 x 4 = 36
10 x 4 = 40

1 x 6 = 6
2 x 6 = 12
3 x 6 = 18
4 x 6 = 24
5 x 6 = 30
6 x 6 = 36
7 x 6 = 42
8 x 6 = 48
9 x 6 = 54
10 x 6 = 60

3/7 Division facts from a multiplication

Any multiplication sum can be written as 2 division sums



3/8 Balancing a sum

left hand side is equal to right hand side

$$3 \times 4 = 12$$

This can be used to find missing numbers

$$3 \times 4 = 3 + \square$$
$$12 = 3 + 9$$

So $\square = 9$

3/9 Add 2 digit numbers mentally

Partitioning

$$36 + 19$$

$$30 + 6 + 10 + 9$$
$$= 40 + 16$$
$$= 56$$

$$36 + 10 + 9$$
$$= 46 + 9$$
$$= 55$$

3/9 Subtract 2 digit numbers mentally

$$63 - 26$$

Partitioning

$$63 - 20 - 6$$
$$= 43 - 6$$
$$= 37$$

Counting on from 26

$$(26) + 4 + 33$$
$$= 37$$

3/11 Solve problems

- When to multiply and when to divide
- When to round up and when to round down

Here is an example



There are 17 children in the playground.
Each bench in the yard can seat 3 children.
How many benches will be needed?

$$17 \div 3 = 5 \text{ r } 2$$

- We need to divide to share the children around the benches
- We need to round up to 6 benches for the remaining 2

Here is another example

Dan made 47 cakes.
He sells them in boxes of 6.
How many full boxes will we have?



$$46 \div 6 = 7 \text{ r } 4$$

- He needs to divide to share the cakes into boxes
- He needs to round down to 7 boxes because he needs to have 6 cakes in each box

3/12 Written method for addition

- Line up the digits in the correct columns

e.g. $132 + 239$

H	T	U	
1	3	2	
2	3	9	+
3	7	1	

3/12 Written method for subtraction

- Line up the digits in the correct columns

e.g. $327 - 119$

H	T	U	
3	2	7	
1	1	9	-
2	0	8	

3/13 Methods for multiplying

$$38 \times 3$$

Column method

$$\begin{array}{r} 38 \\ \times 3 \\ \hline 114 \end{array}$$

Grid method

	30	8
3	90	24

$$90 + 24 = 114$$

Partitioning method

$$\begin{aligned} 38 \times 3 \\ = 30 \times 3 + 8 \times 3 \\ = 90 + 24 \\ = 114 \end{aligned}$$

To multiply by 10

Move all the digits along one place to the left.
Remember to put a zero in the units.

H	T	U
	3	0
3	0	0

$$30 \times 10 = 300$$

3/13 Methods for dividing

$$25 \div 3$$

$$8 \times 3 = 24 \quad \text{So } 25 \div 3 = 8 \text{ r } 1$$

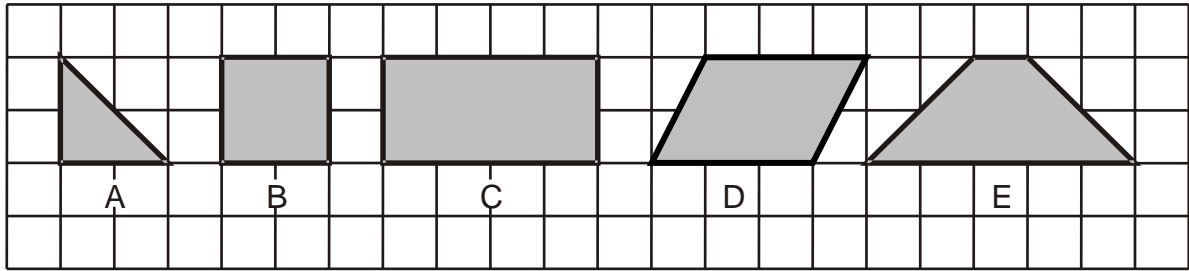
To divide by 10

Move all the digits along one place to the right.

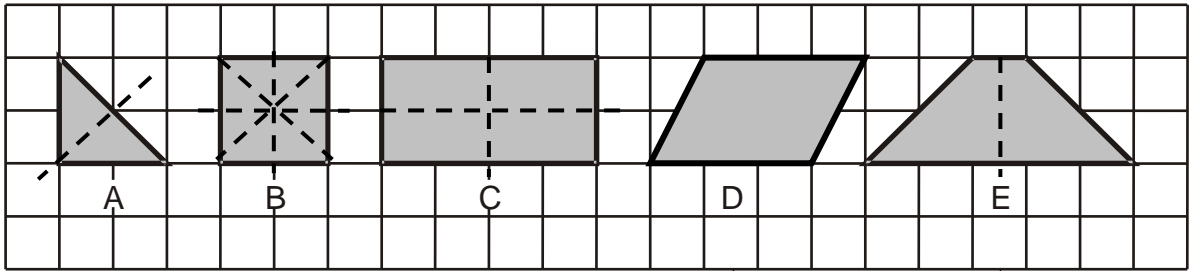
H	T	U
	3	0
		3

$$30 \div 10 = 3$$

3/14 Classify 2D shapes

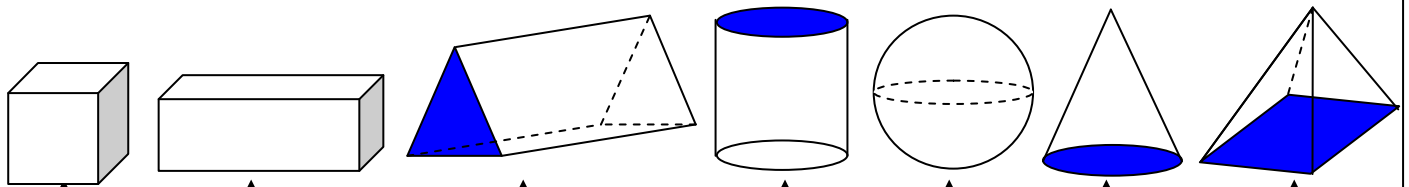


↕ Triangle
 ↕ Square
 ↕ Rectangle
 ↕ Parallelogram
 ↕ Trapezium



↕ Reflective symmetry
 ↕ Reflective symmetry
 ↕ Reflective symmetry
 ↕ **NO** reflective symmetry
 ↕ Reflective symmetry

3/14 Classify 3D shapes



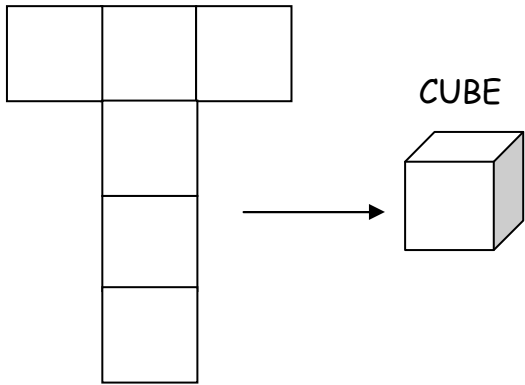
↕ Cube
 ↕ cuboid
 ↕ triangular prism
 ↕ cylinder
 ↕ sphere
 ↕ cone
 ↕ square-based pyramid

All have a curved surface

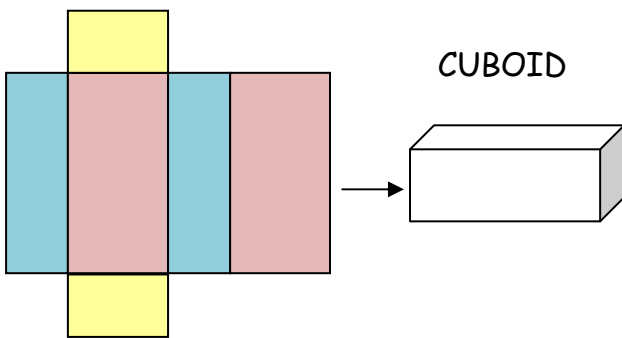
All are prisms - same shape through the length

Pyramids go to a point

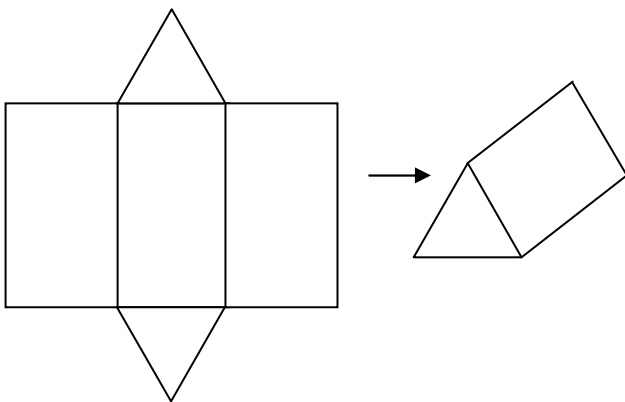
3/15 Nets of 3D shapes



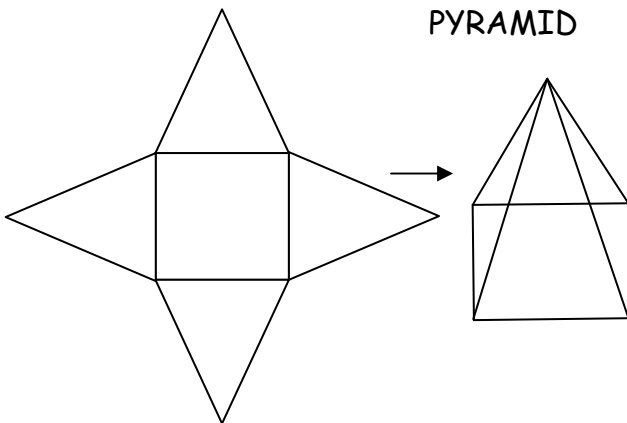
CUBE



CUBOID

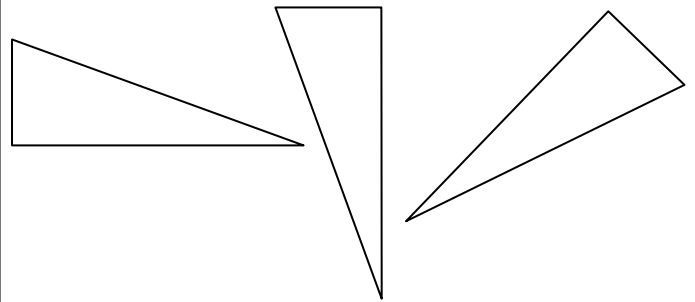


SQUARE-BASED
PYRAMID



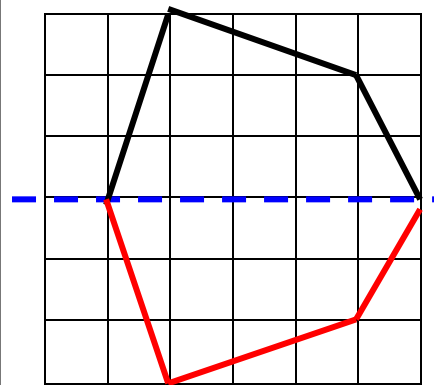
3/16 Shapes in different orientations

These are the same shapes - just moved round

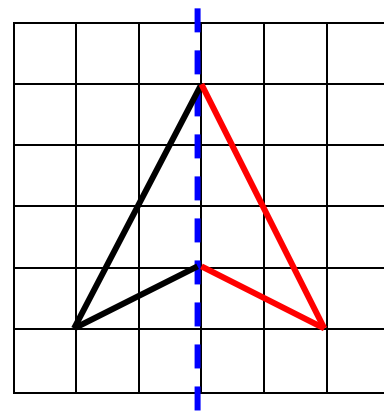


These shapes have been reflected - flipped over

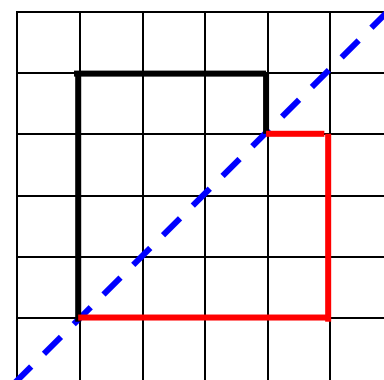
In a HORIZONTAL mirror line



In a VERTICAL mirror line



In a 45° mirror line



3/17 Describe position and movement

LEFT



RIGHT



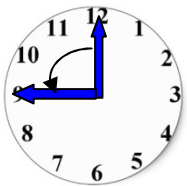
ANTICLOCKWISE



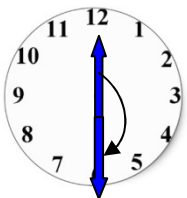
CLOCKWISE



Clockwise 90° or $\frac{1}{4}$ turn



Anticlockwise 90° or $\frac{1}{4}$ turn

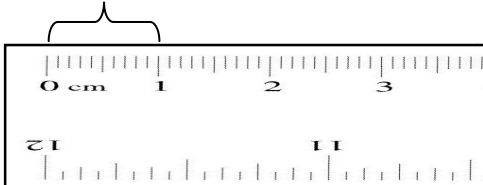


Half turn

3/18 Use standard units

MEASURES OF LENGTH

1cm = 10mm



1 metre = 100cm

1 kilometre = 1000m

MEASURES OF WEIGHT

1 gram



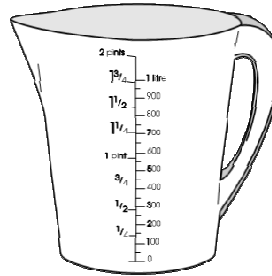
1kilogram = 1000g

MEASURES OF LIQUID(Capacity)

5 millilitre spoon



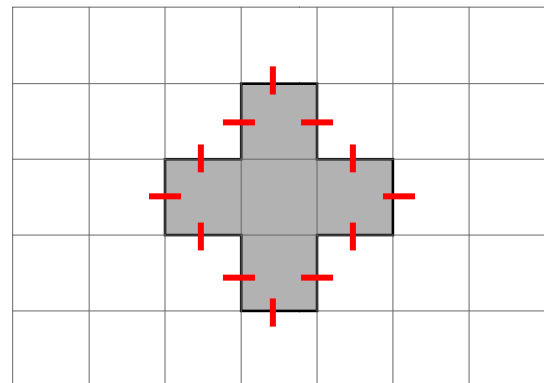
1 litre = 1000ml



3/19 Other units of measure

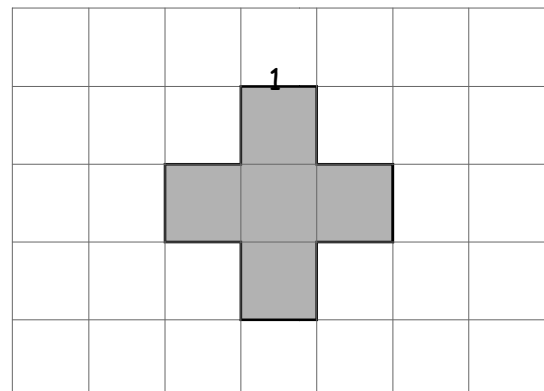
PERIMETER is the distance round the outside of a shape

Perimeter of this shape = 12cm

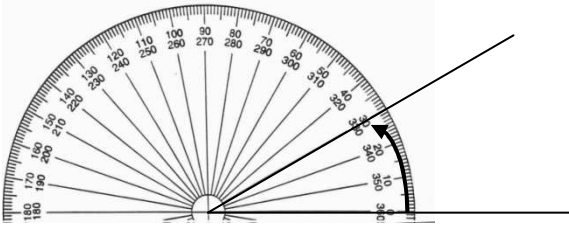


AREA is the number of squares **INSIDE**

Area of this shape = 5cm^2













ANGLE is the amount of turn
This angle is 30°



3/21 Construct pictogram

This question is about the number of bags of sugar you could buy with £10

Key:  = 4 bags

Year	Number of bags
1995	   
1999	    

Do not forget the KEY

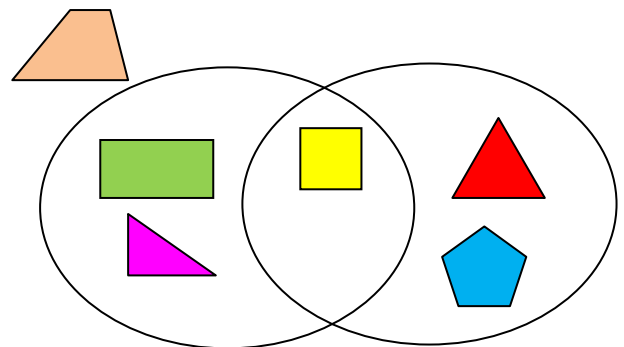
3/20 Gather information

To record the number of birds in the garden

Type of bird	Tally	Number of birds
Blackbird		10
Blue-tit		4
Starling		2
Sparrow		3
Other		1

3/22 Venn Diagram

These are used to record and sort information

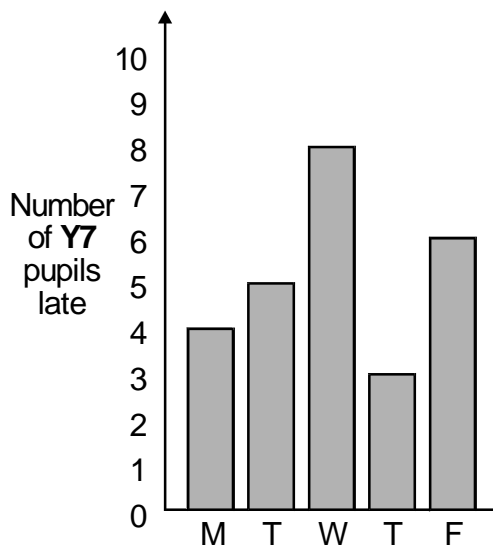


Shapes with right angles

Shapes with equal sides

3/21 Construct bar chart

Leave gaps between the bars



3/22 Carroll Diagram

	Number of Boys	Number of Girls
Brown eyes	11	12
Blue eyes	4	3

3/23 Extract information from bar charts, pictograms and tables