Stage 3 PROMPT sheet

1 Count in multiples

Make sure you keep practising stage 2 multiples.
Then you need to learn these multiples:

Multiples of 4	Multiples of 8	Multiples of 50	Multiples of 100
0	0	0	0
4	8	50	100
8	16	100	200
12	24	150	300
16	32	200	400
20	40	250	500
24	48	300	600
28	56	350	700
32	64	400	800
36	72	450	900
40	80	500	1000

2 Find 10 more or 10 less

hundreds	tens	ones
3	5	2

10 more than 352 becomes 362.
10 less than 352 becomes 342."
Say: "It is the 'tens digit' that changes.

3 Find 100 more or 100 less

hundreds	tens	ones
3	5	2

100 more than 352 becomes 452.
100 less than 352 becomes 252."
Say: "It is the 'hundreds' digit that changes.

4 Recognise place value

hundreds	tens	ones
3	5	2

Partition numbers into hundreds, tens and ones:

352 means 300 + 50 + 2

5 Numbers in words and figures

Need to be able to read and write numbers up to 1000 as words and figures.

Up to 100:

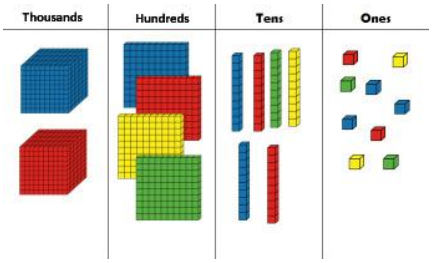
Hundred	Ten	Ones
1	4	7
One hundred	forty	seven
One hundred and forty-seven		

Hundred	Ten	Ones
4	0	9
Four hundred		nine
Four hundred and nine		

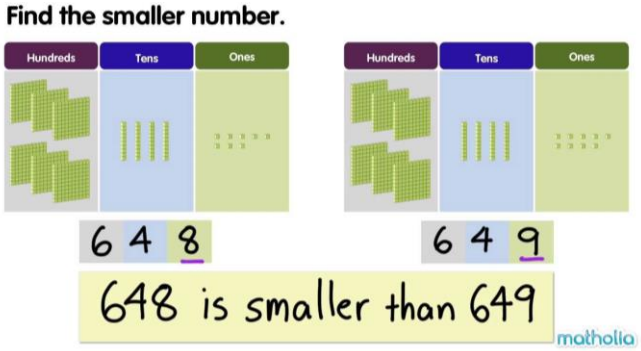
Up to 1000:

Thousands	Hundred	Ten	Ones
1	3	6	1
One Thousand	Three hundred	Sixty	One
One thousand, three hundred and sixty one			

6 Make numbers using equipment up to 1000

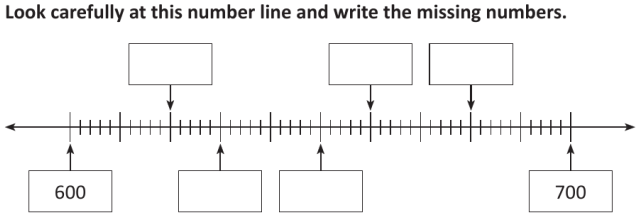


7 Compare numbers up to 1000



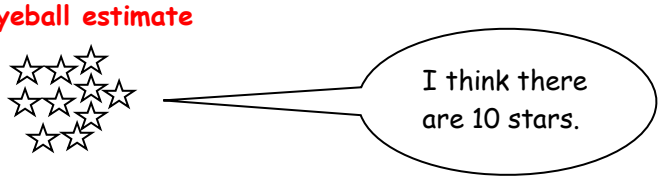
hundreds	tens	ones
6	4	8
6	4	9

8 Order numbers up to 1000



9 Estimating

Eyeball estimate



How can you use this image to estimate larger amounts?

Say: "I estimate there are about 60 because I think it's about 6 times larger than the first group."

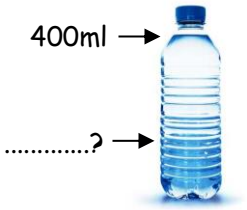
11 Estimate the answer to a calculation

Example: Estimate the cost of 5 magazines at £1.95 each

Answer: It is about 5 x £2 = £10

Example: When full this bottle holds 400ml.

Estimate how much water is left in this bottle.



12 Mental addition

Add ones to a three-digit number:

620 + 4 = 624

Add tens to a three-digit number:

620 + 30 = 650

Add hundreds to a three digit number:

620 + 100 = 720

12 Written method for addition

Expanded Column Addition without bridging:

Ensure digits are lined up in the correct columns

132 + 237 =

H T O	H	T	O
1 3 2	100	30	2
2 3 7 +	200+	30+	7+
3 6 9	300	60	9

Expanded column Addition with bridging:

Ensure digits are lined up in the correct columns

132 + 239 =

H T O	H	T	O
1 3 2	100	30	2
2 3 7 +	200+	30+	9+
3 7 1	300	70	1
		10	

13 Written method for subtraction

Expanded Column Subtraction without bridging:
Ensure digits are lined up in the correct columns

239 - 102 =

H	T	O		H		T		O
2	3	9		200		30		9
1	0	2	-	100	-	0	-	2
1	3	7		100		30		7

Expanded column Subtraction with bridging:
Ensure digits are lined up in the correct columns

230 - 102 =

			T	
H	T	O	H	20	O
2	3	0	200	~~30~~ →	10
1	0	2 -	100 -	0 -	2 -
1	2	7	100	20	7

Estimate answers to calculations

- Round off each number
- Then do the calculation

Example:
Estimate 83 + 28
8 + 2 =10
80 + 20 = 100

Estimate "The answer will be around 100."

Missing number problems

Fact family for +/-

34 + 23 = 57

57 - 23 = 34

23 + 34 = 57

57 – 34 = 23

Fact family for x/÷

9 x 8 = 72

72 ÷ 9 = 8

8 x 9 = 72

72 ÷ 8 = 9

14 Multiply & divide

- A 2-digit number by a single digit

Column method

$$\begin{array}{r} 38 \\ \times\ 3 \\ \hline 114 \\ \hline {\scriptstyle 2} \end{array}$$

Grid method

	30	8
3	90	24

90 + 24 = **114**

Partitioning method

38 x 3
= 30 x3 + 8 x 3
= 90 + 24
= 114

Multiply & divide

- Look for connections between two sums
- Remember the fact family for x/÷

Example: 6 x 4 = 24 (x10) So **60** x 4 = 240
So 240 ÷ 4 = 60

Example: 9 x 8 = 72 (x2) So 18 x 8 = 144
So 144 ÷ 8 = 18

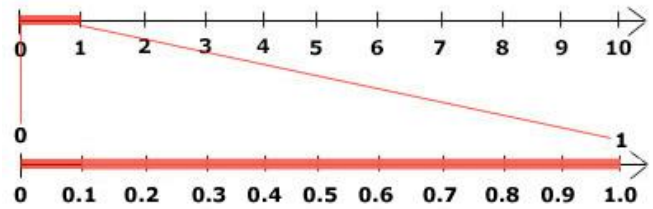
15 Tenths

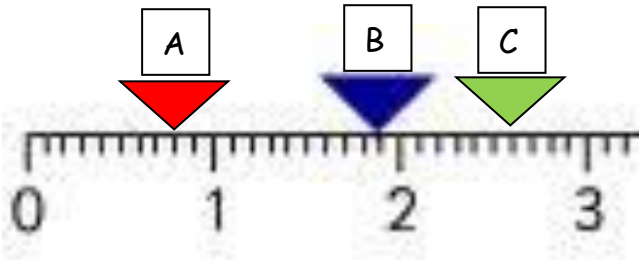
tens	ones	•	tenths
8	2	•	6

- This represents 6 tenths = $\frac{6}{10}$

Counting in tenths

- A whole one divided into 10 equal parts
- 1 ÷ 10 = 1 tenth or $\frac{1}{10}$ Or 0.1



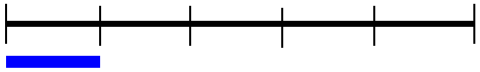


Example: $\frac{1}{10}$ of 20 = 20 ÷ 10 = 2

16 Fraction of a line or objects

- To find $\frac{1}{5}$ of a line

  Divide the line into 5 equal parts



Each part is $\frac{1}{5}$

- To find $\frac{1}{5}$ of a set of objects

  Divide objects into 5 equal parts

A – 0.8
B – 1.9
C – 2.6

- To find a tenth of an object or quantity you divide by 10

Write a fraction of a number of objects

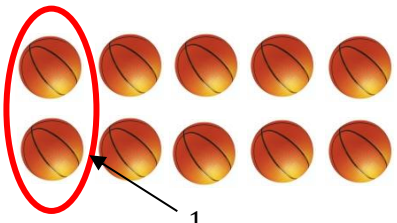
$\frac{2}{5}$ are blue and $\frac{3}{5}$ are red

17 Fractions of numbers

To find $\frac{1}{5}$ of 20 we do 20 ÷ 5 = 4

To find $\frac{2}{5}$ of 20 we do 4 x 2 = 8

To find $\frac{3}{5}$ of 20 we do 4 x 3 = 12

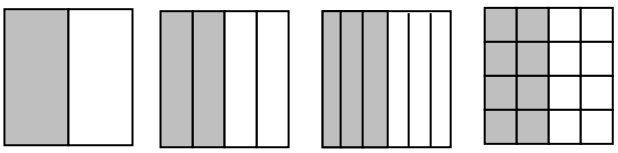


Each part is $\frac{1}{5}$

18 Equivalent fractions

- The same fraction can be expressed in different ways

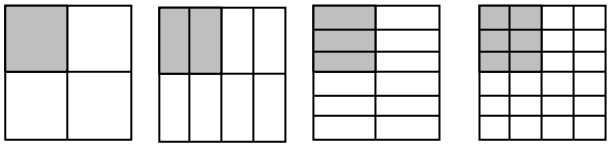
ALL THESE ARE $\frac{1}{2}$



$\frac{1}{2}$ = $\frac{2}{4}$ = $\frac{3}{6}$ = $\frac{8}{16}$

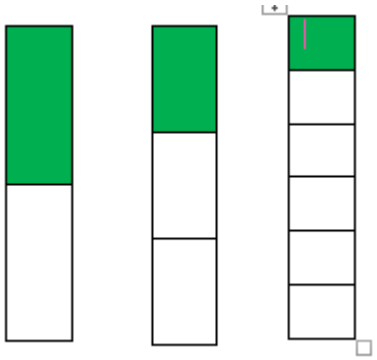
Fractions (continued)

ALL THESE ARE $\frac{1}{4}$



$\frac{1}{4} = \frac{2}{8} = \frac{3}{12} = \frac{6}{24}$

- Unit Fractions



$\frac{1}{2}$ 1/3 1/6

The bigger the denominator, the smaller the fraction

19 Add & subtract fractions

- To add and subtract fractions

When the denominators are the same

$\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$

Do not add the denominators

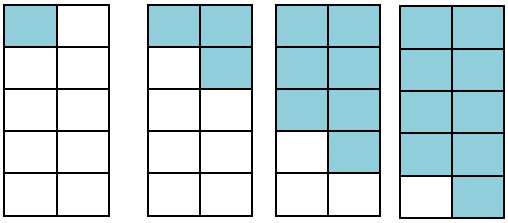
$\frac{5}{7} - \frac{1}{7} = \frac{4}{7}$

Do not subtract the denominators

20 Compare fractions

- **Fractions with the same denominator**

$\frac{1}{10}$ $\frac{3}{10}$ $\frac{7}{10}$ $\frac{9}{10}$

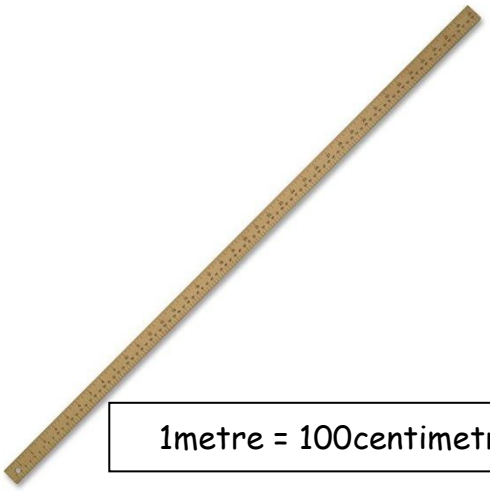


The bigger the numerator, the bigger the fraction

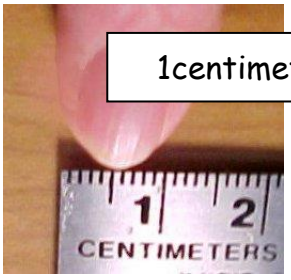
21 Add & subtract measures

- **The units must be the same**

Length – Example



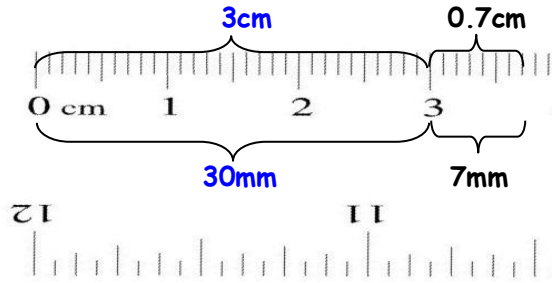
1metre = 100centimetres



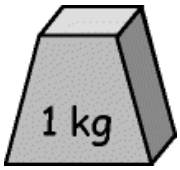
1centimetre = 10millimetres

Measures (continued)

3cm + 7mm
= 30mm + 7mm
= 37mm
or 3cm 7mm or 3.7cm



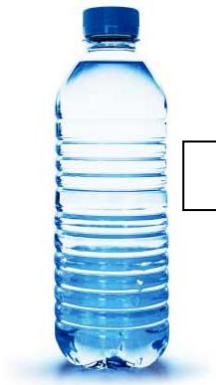
Mass – Example



= 1000g 

3kg – 450g
= 3000g – 450g
= 2550g
or 2kg 550g or 2.55kg

Volume – Example



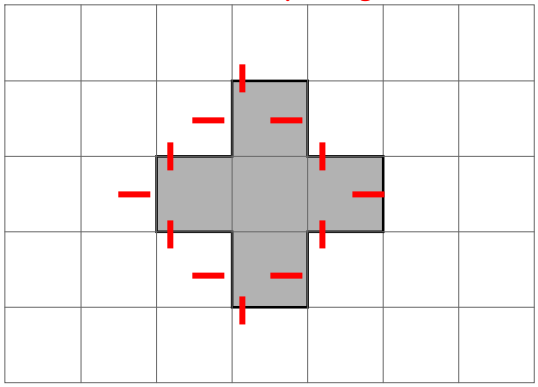
1litre = 1000millilitres

800ml + 720ml
= 1520ml
= 1 litre and 520ml
= 1.52 litres

22 Perimeter

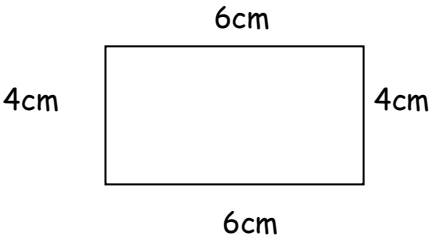
PERIMETER is the distance round the outside of a shape

- **On a centimetre square grid – count round**



Perimeter of this shape = 12cm

- **Measurements given - add up all round**



Perimeter of this shape = 6 + 4 + 6 + 4 = 20cm

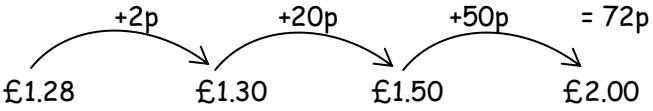
23 Bills and change

To work out a bill
1 chocolate bar - £1.10
1 pen – 10p
1 pencil – 8p
Total = £1.28

Use column method with decimal point

£1.10
10p
8p
£1.28

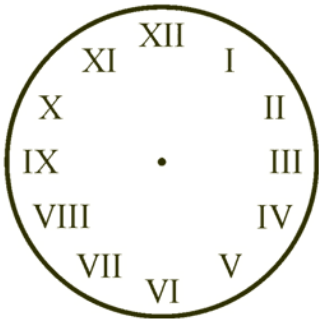
To find change by the 'add-on' method



24 Time

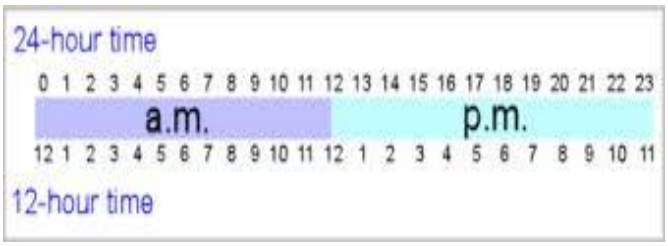
Analogue clock

Roman



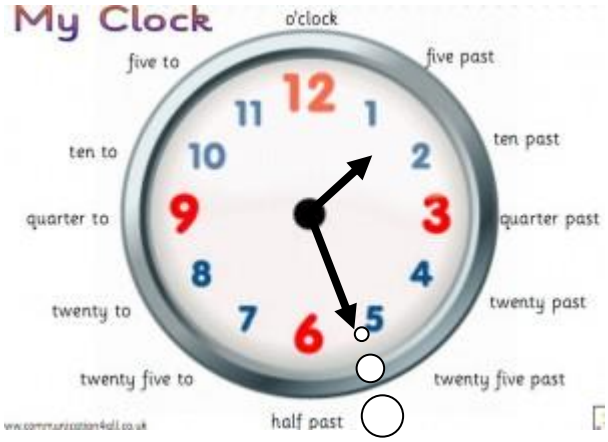
Hindu-Arabic

12- and 24-hour clock



Time

Reading the time

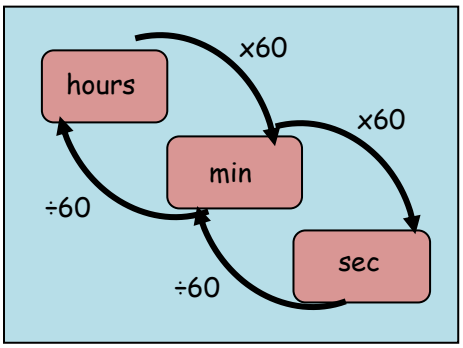


5 minutes between each number- so this time is 1:27 or we say 27 minutes

Times of the day in 12-hour clock

Morning	Afternoon
12.00 midnight	12.00 noon
1.00 am	1.00 pm
2.00 am	2.00 pm
3.00 am	3.00 pm
4.00 am	4.00 pm
5.00 am	5.00 pm
6.00 am	6.00 pm
7.00 am	7.00 pm
8.00 am	8.00 pm
9.00 am	9.00 pm
10.00 am	10.00 pm
11.00 am	11.00 pm
12.00 noon	12.00 midnight

Time – hours minutes, seconds



Months of the year

- A rhyme to remember the days in each month

30 days has September,
April, June and November.
All the rest have 31
Except February alone,
Which has 28 days clear
And 29 in each leap year.

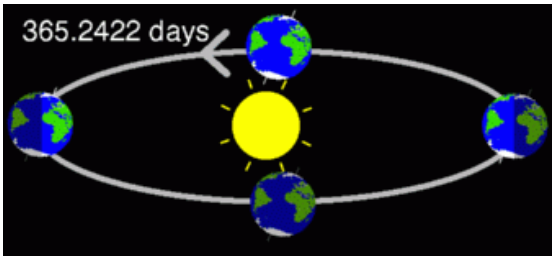
- the "knuckle method"

Time (continued)

A knuckle is "31 days", and in between each knuckle it isn't.
And where your hands meet, the two knuckles are "July, August", which both have 31 days.

February has 28 days & 29 days in a leap year (every 4 years)

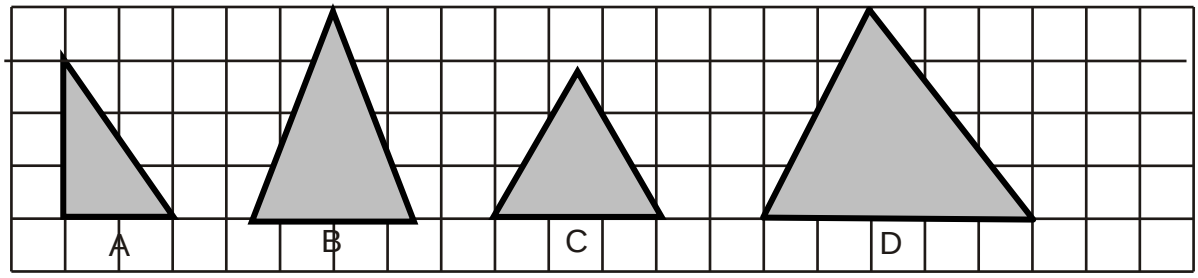
Days in a year



365 days in a year
366 days in a leap year

25 2D Shapes

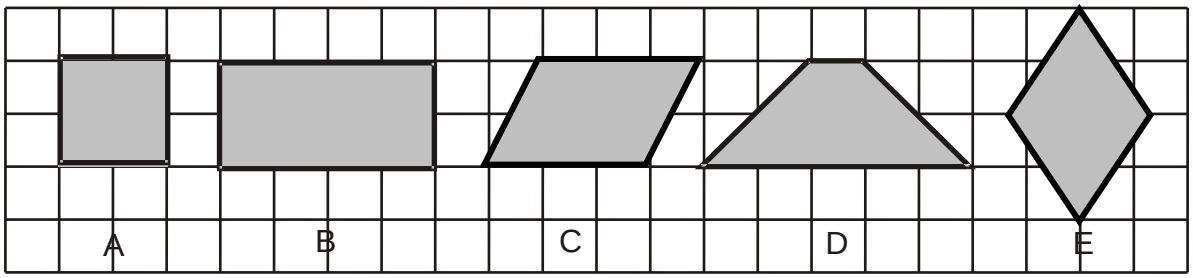
- **With 3 sides (Triangles)**



right-angled **isosceles** **equilateral** **scalene**

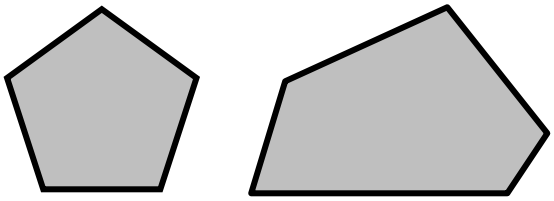
2D Shape (continued)

- **With 4 sides (Quadrilaterals)**



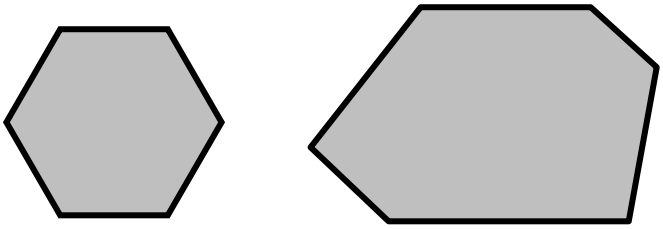
square rectangle parallelogram trapezium rhombus

- **With 5 sides (Pentagons)**



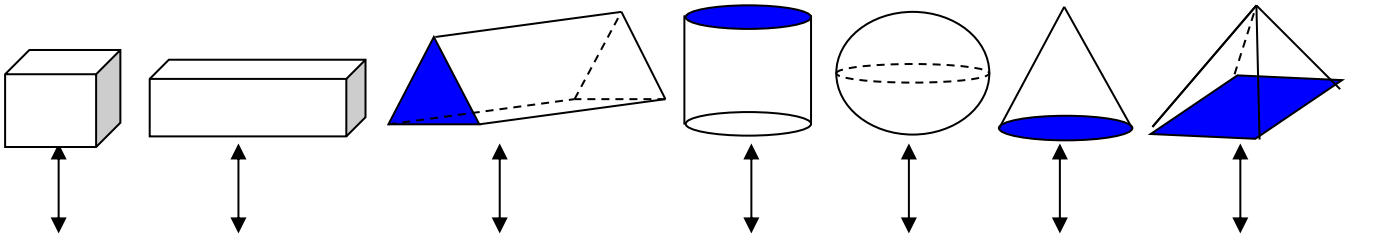
regular irregular

- **With 6 sides (Hexagons)**



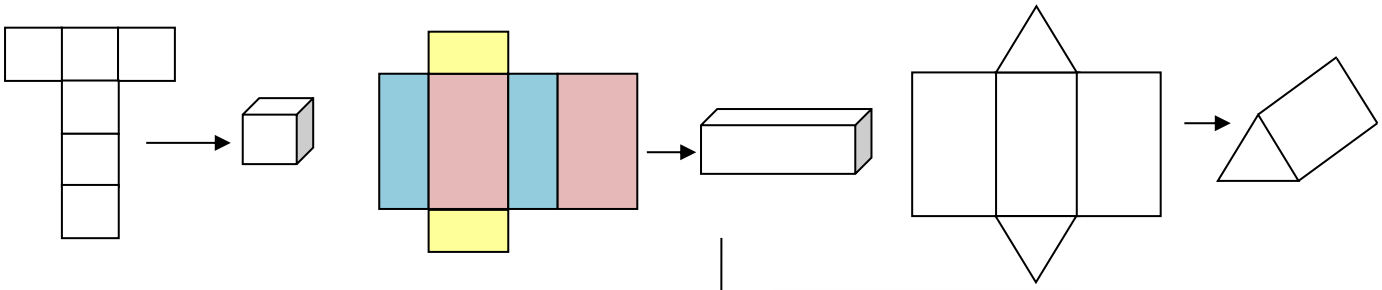
regular irregular

3D Shapes



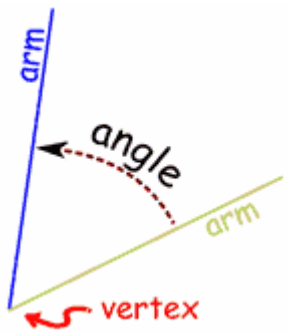
Cube cuboid triangular prism cylinder sphere cone square-based Pyramid

- **Nets**



26 Angles

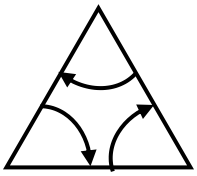
- **An angle is an amount of a turn**



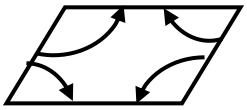
Angles (continued)

- **Angles in shapes**

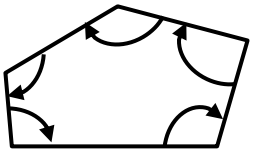
Triangle - 3 angles



Quadrilateral - 4 angles

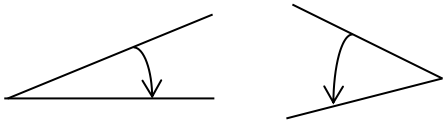


Pentagon – 5 angles

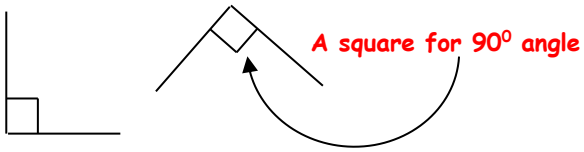


- **Names of angles**

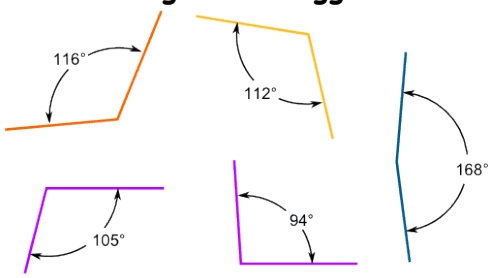
ACUTE angles are less than 90^0



RIGHT angles are exactly 90^0

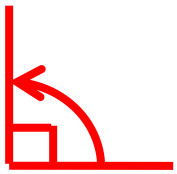


OBTUSE angles are bigger than 90^0

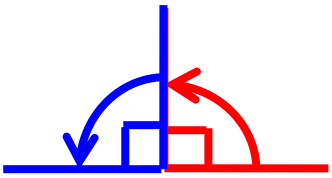


Right angles

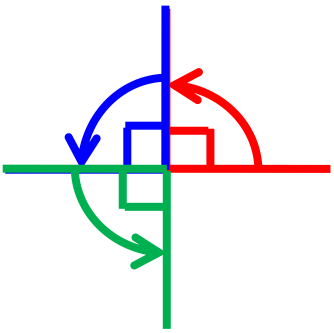
ONE right angle measures exactly 90^0



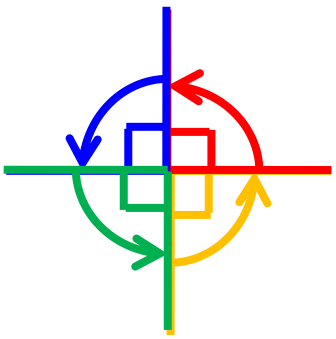
TWO right angles measure exactly 180^0
This is called a half-turn



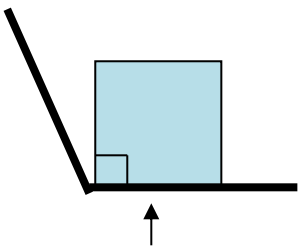
THREE right angles measure exactly 270^0
This is called three quarters of a turn



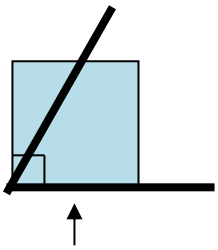
FOUR right angles measure exactly 360^0
This is called a full or complete turn



To check if an angle is bigger or smaller than a right angle, use a square corner



This angle is greater than a right angle



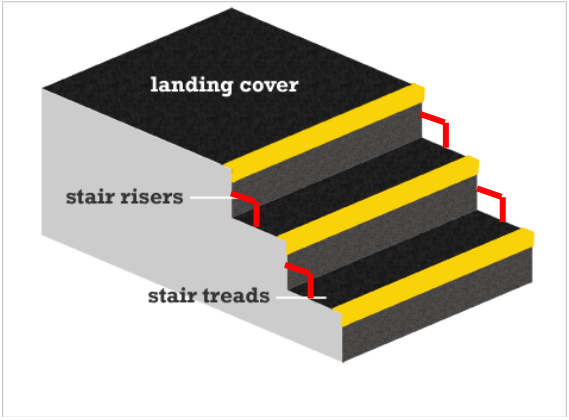
This angle is less than a right angle

27 Types of Lines

The Horizon is a horizontal line

This cliff face is a vertical line

The running track is parallel lines (never meet)



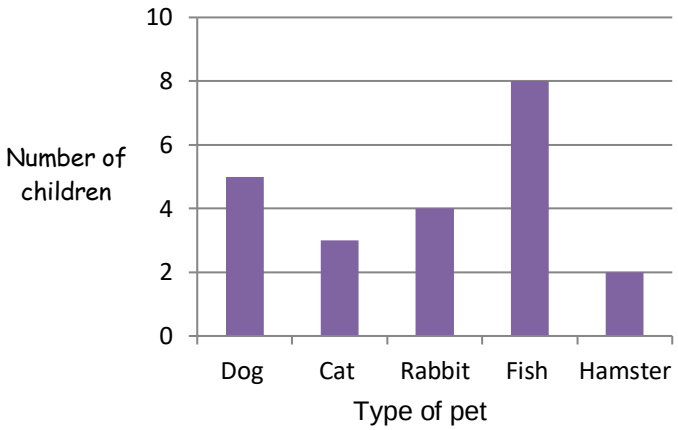
The rise & tread are perpendicular lines (meet at 90°)

28 Tables and graphs

Frequency table to show pets owned by Year 3

Type of pet	Tally	Number of pets
Dog	𝍸	5
Cat	III	3
Rabbit	IIII	4
Fish	𝍸 III	8
Hamster	II	2

A bar graph to show pets owned by Year 3



Pictogram to show the colours in a tube of Smarties

Colour	Number of Smarties
Green	
Orange	
Blue	
Pink	
Yellow	
Red	
Purple	
Brown	
	Key = 2 smarties

Solve answers to questions

- **Bar chart in 28**

(i) How many **more** children own a rabbit than a hamster?

Answer: 4-2 = 2

(ii) What is the **difference** between the number of children who own a dog and the number of children who own a cat?

Answer: 5 – 3 = 2

(iii) How many pets are owned **altogether** by the children Year 3?

Answer: 5 + 3 + 4 + 8 + 2 = 22

- **Pictogram in 28**

(i) How many **fewer** blue smarties are there than yellow ones?

Answer: 11 – 5 = 6

(ii) Work out the **total** number of smarties in the tube

Answer: 55