

Maths Test Tips

Ma	Mathematics tests			
KEY STAGE 2				
LEVEL 3-5	Test A Calculator not allowed			
2013	First name			
	Middle name			
	Last name			
	Date of birth	Day	Month	Year
	Telephone			
	GP address			
	For school use only			
		Day	Month	Year

Place Value



- Remember where the digits are and what they are worth.
- Remember the names of the place value columns.
- The decimal point never moves
- Numbers less than 0 are negative numbers.

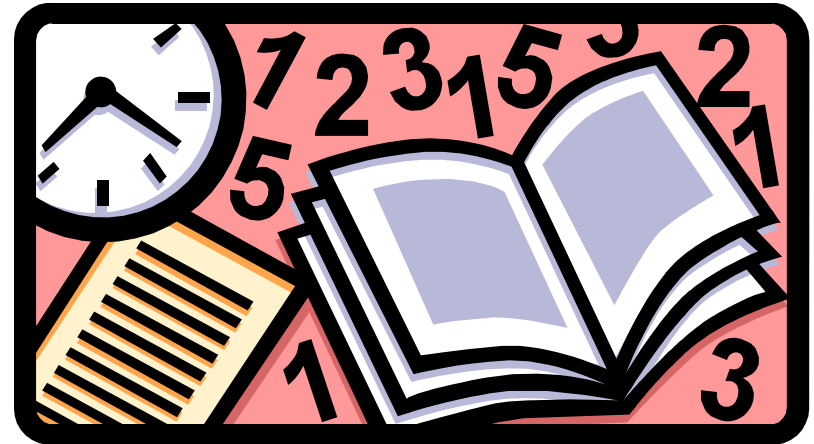
Addition

- Use a number line.
- Put numbers in the columns and add up from the units first.
- Keep columns in line, remember the decimal points must line up.
- Remember sum, total, altogether etc.



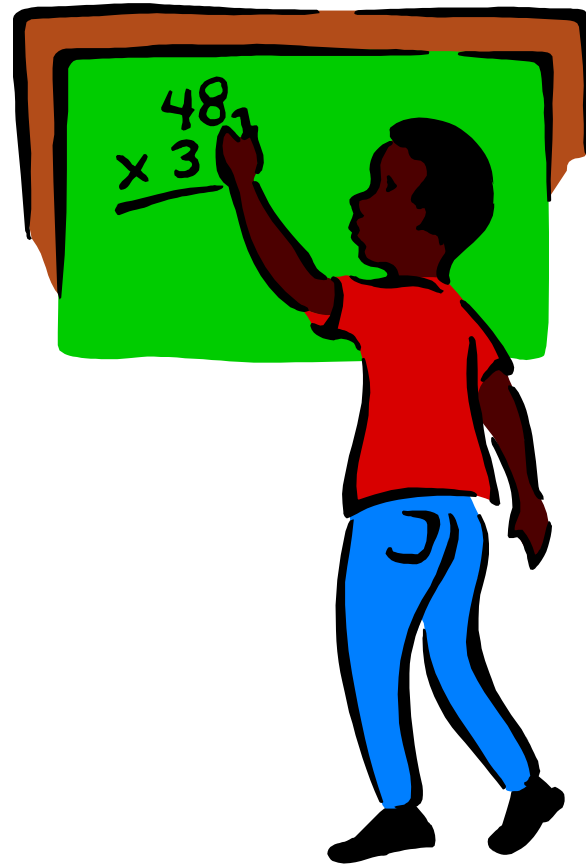
Subtraction

- Use a number line, count on or put into columns.
- Difference, decrease, minus etc
- Take away but don't forget to borrow (knock next door).

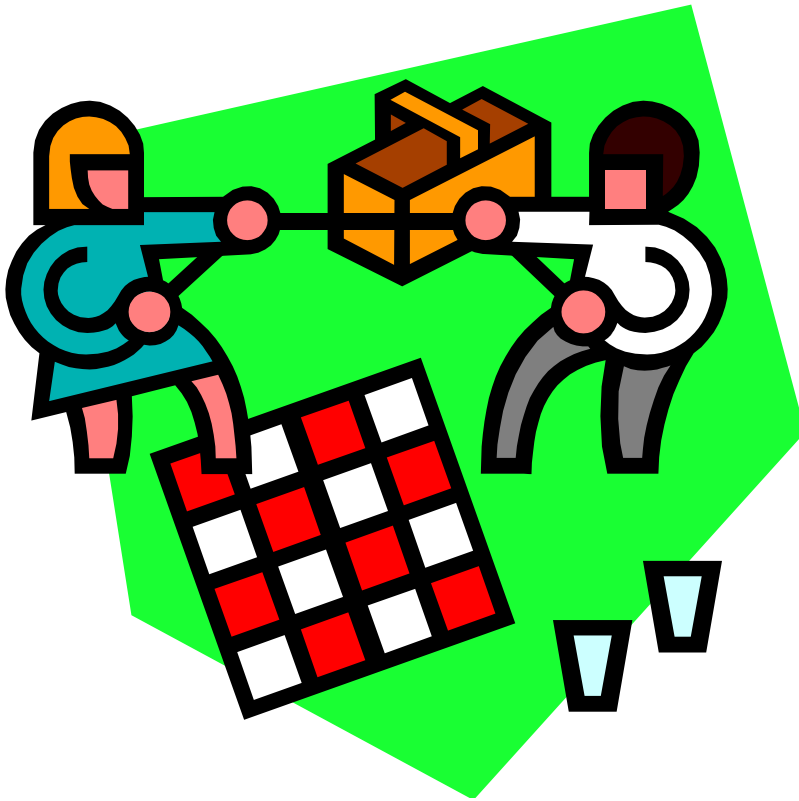


Multiplication

- Put into a grid method.
- Use the tables you do know to work out those you don't.
- Find the product means multiply.



Division



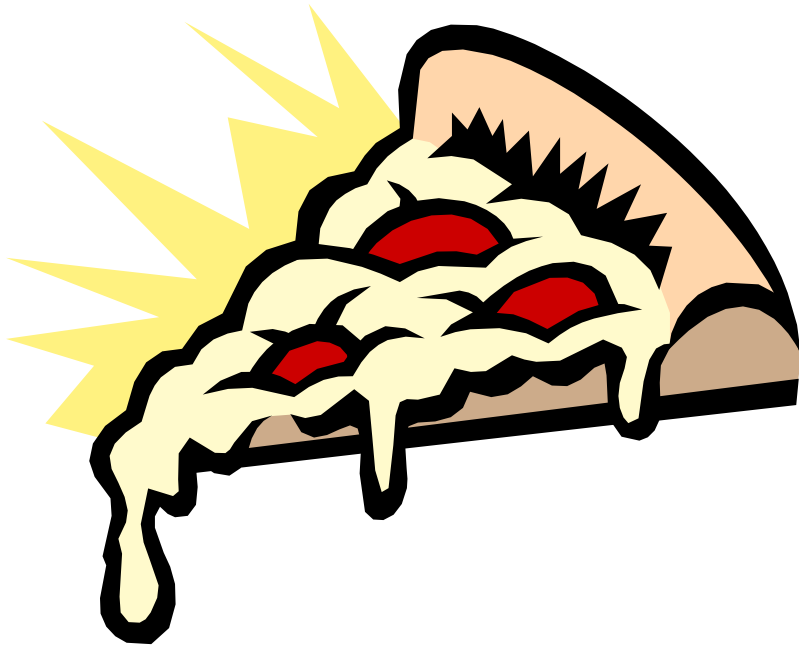
- How many lots of ? in ?
- Use chunking or the bus stop method.
- Share, divisible, how many each etc

Fractions



- Count how many out of the total.
- Equivalent means the same as.
- Lowest form means cancel down.
- Turn fractions into decimals by dividing the top by the bottom.

Decimals



- Decimal numbers come after the decimal point and are in the tenths or hundredths columns.
- If you need to order decimals then look at tens and units first.

Percentages

- Percentages are amounts out of 100.



Graphs

- Read graphs carefully.
- Use the scale up the side and read carefully.
- In a pictogram each picture may be worth more than one.
- Read all the information carefully.



Number Patterns



- Look carefully and see what the pattern is.
- Is it increasing or in ascending order?
- Is it decreasing or descending order?
- Think about the order of numbers especially decimals or fractions.

Coordinates

- Along the corridor and up the stairs. X before Y.
- You may need to translate shapes from one quadrant to another. Remember the order of the quadrants.



Shape

- 2D shapes think about angles, symmetry, parallel lines.
- 3D shapes think of corners, sides, faces, nets.
- Can you imagine unfolding it and lying flat?

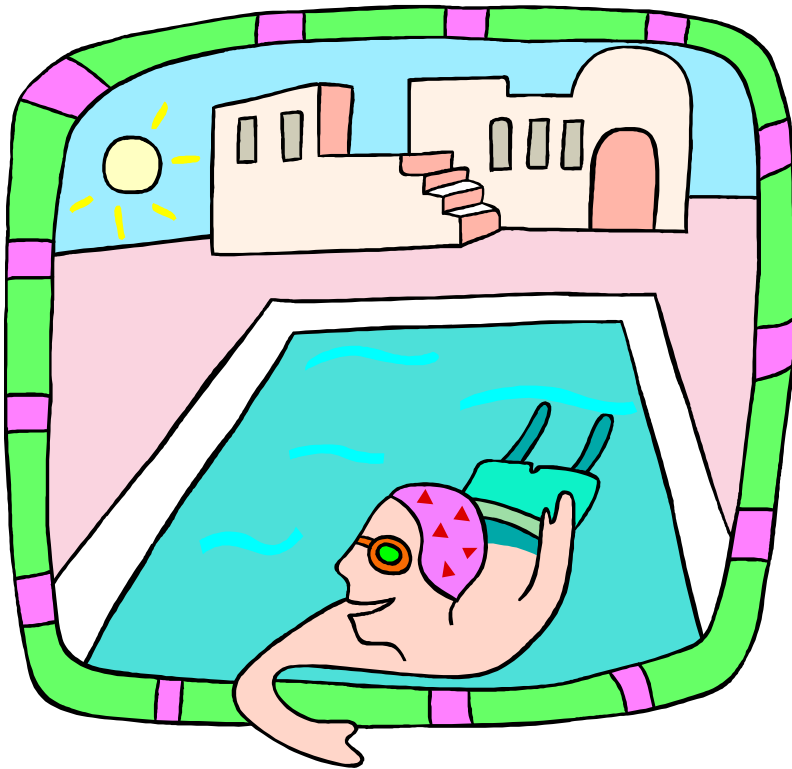


Perimeter

- Perimeter is all the way round a shape.
- So if a square has a 9cm side the perimeter is $9+9+9+9=36\text{cm}$



Area



- To calculate area you need to multiply one side by another.
- So if a square has a side of 9cm you have to do $9 \times 9 = 81 \text{ cm squared}$ written with a little 2.
- Or a rectangle maybe $4 \times 8 = 32 \text{ cm squared}$.

Measures

You should know:

- $1000\text{ml} = 1 \text{ litre}$
- $1000\text{g} = 1 \text{ kg}$
- $10\text{mm} = 1\text{cm}$
- $100\text{cm} = 1\text{m}$
- $1000\text{m} = 1\text{km}$
- You may need to convert eg. $4500\text{ml} = 4.5\text{litres}$.



Scales



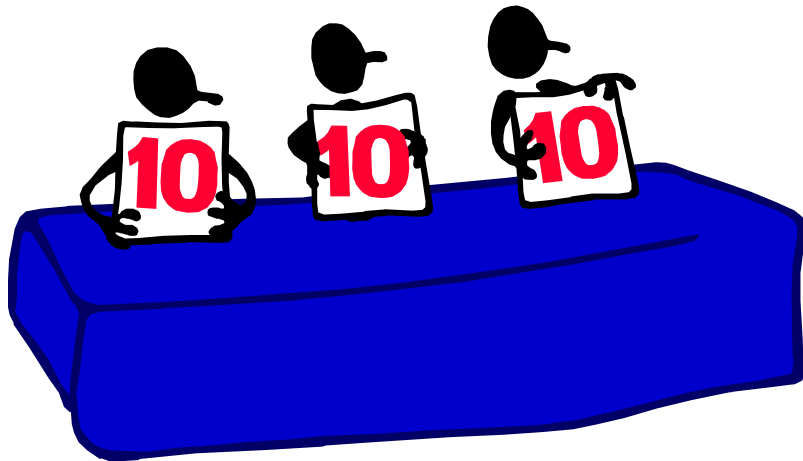
- Read scales carefully they may go in 1s, 2s, 5s, 10s, 20s, 25s or 50s. Read on to check. Don't forget if they are in between two numbers what will that be.

Range



- Find the biggest and the smallest and take them away from each other.

Mode



- The Mode is the number that appears the most.

Median



- Put them in order and find the one in the middle.
- E.g. 4 6 2 8 5
- 2 4 5 6 8
- So the number in the middle is 5.

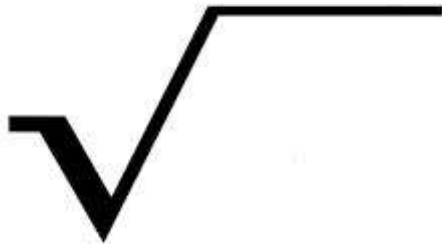
Mean or average

- Add them all together and divide by how many there are.
- E.g. Five children did a maths test and their scores were 3, 6, 5, 2, 9
- Add them together to get 25
- Divide by 5 = 5



Square roots

Square Root Symbol



- The square root of a number is a value that, when multiplied by itself, gives that number.
- For example find the square root of 49.
- 7×7 is 49 so the answer is 7.
- It is shown by a tick with a line.

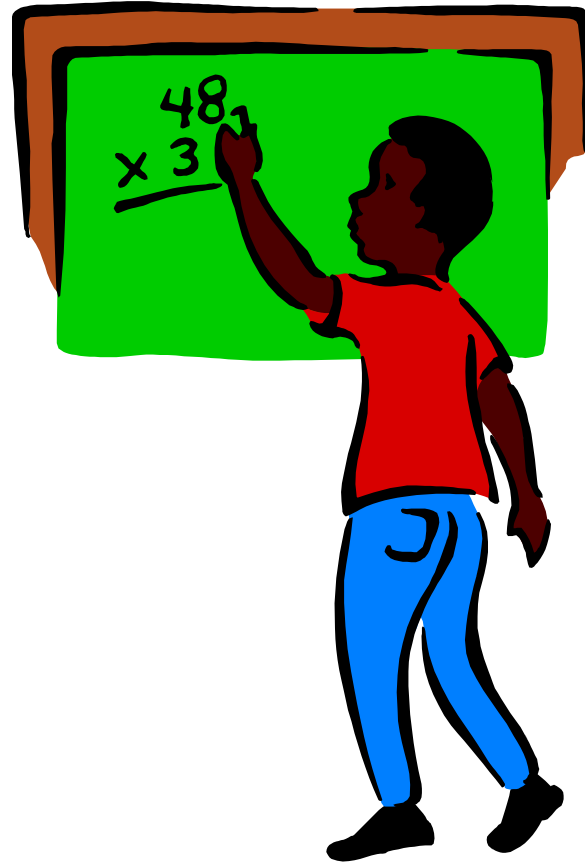
Prime numbers



- A Prime Number is a number that can only be divided by 1 and itself.
- 5 can only be divided by 1 and 5.

Factors

- Factors are numbers you multiply together to get another number.
- Example: 2 and 3 are factors of 6, because $2 \times 3 = 6$.
- If they only have 2 factors then they are a prime number.

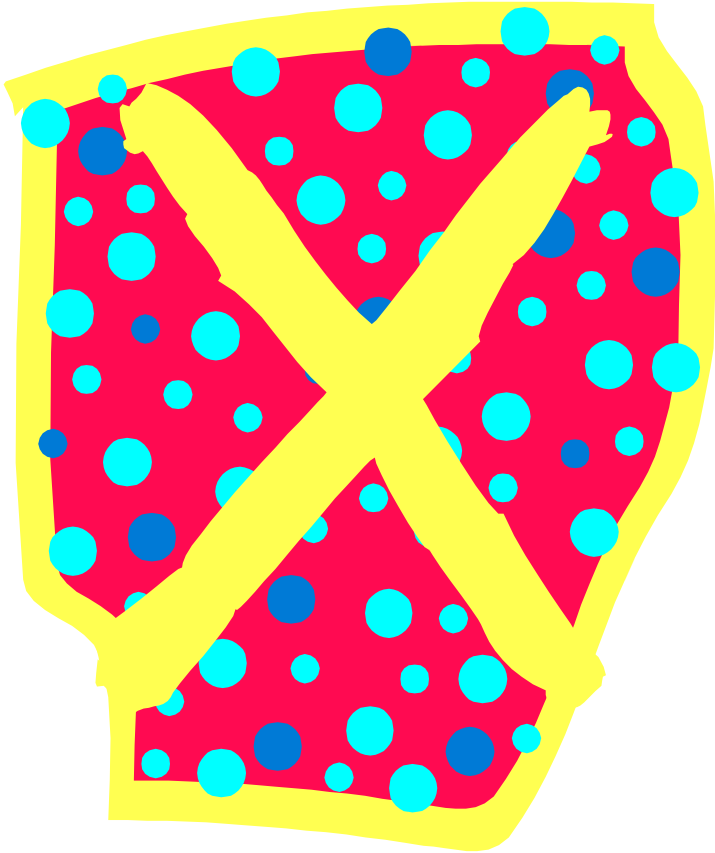


Multiples



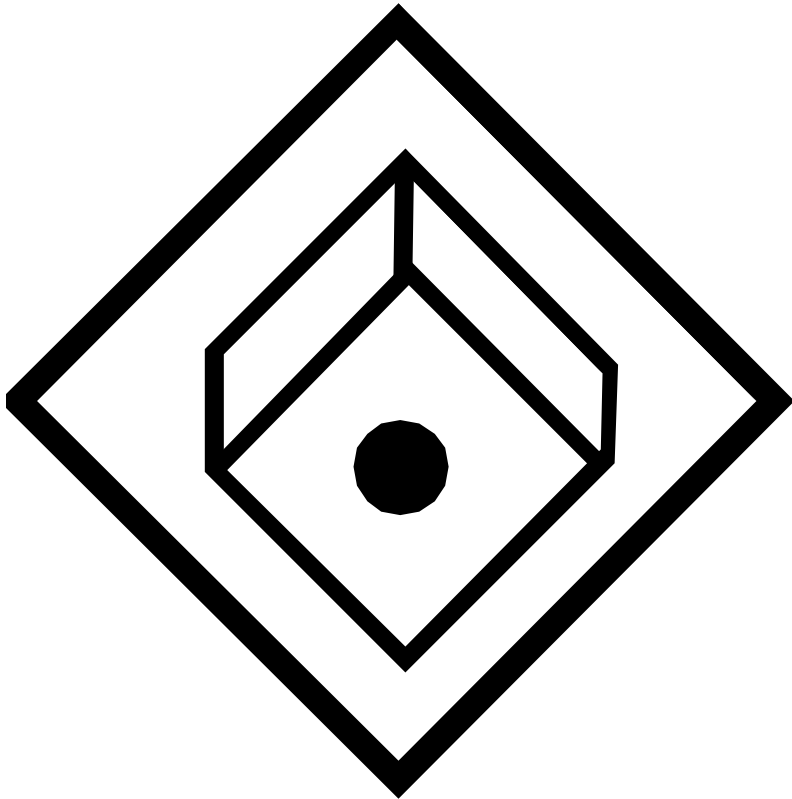
- A multiple is the result of multiplying a number by an integer (not by a fraction).
- Examples: 12 is a multiple of 3, as $3 \times 4 = 12$
- 6 is a multiple of 3, as $3 \times 2 = 6$
- Be careful they may ask for the next multiple of 3 after 25 and the answer is 27 because $3 \times 9 = 27$. So don't just add on 3 to 25 because 28 is wrong.

Square numbers



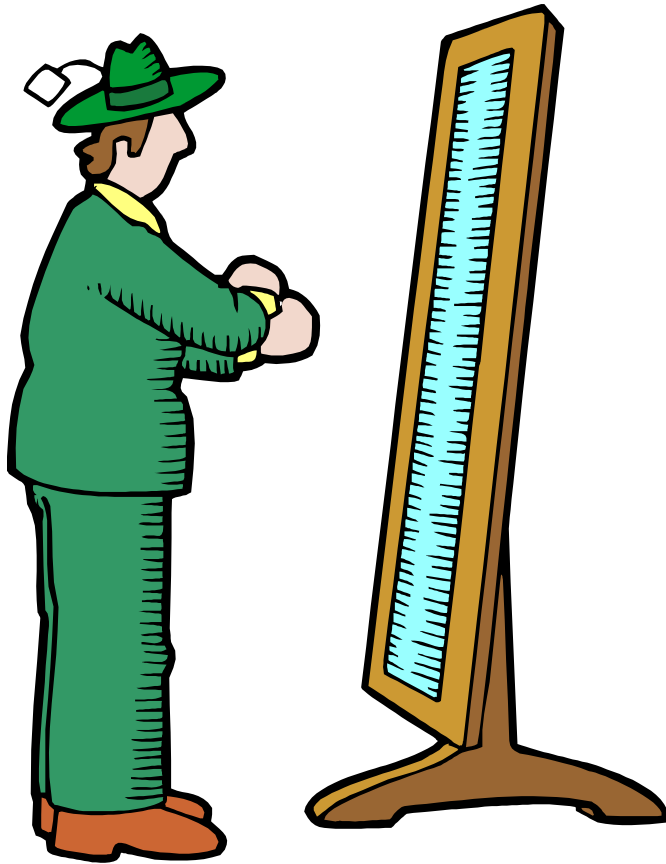
- Squared numbers are multiplied by themselves.
- So $40 \times 40 = 1600$.
- The pattern is
1,4,9,16,25,36,49,64,81,100,121,144 etc

Cubed numbers



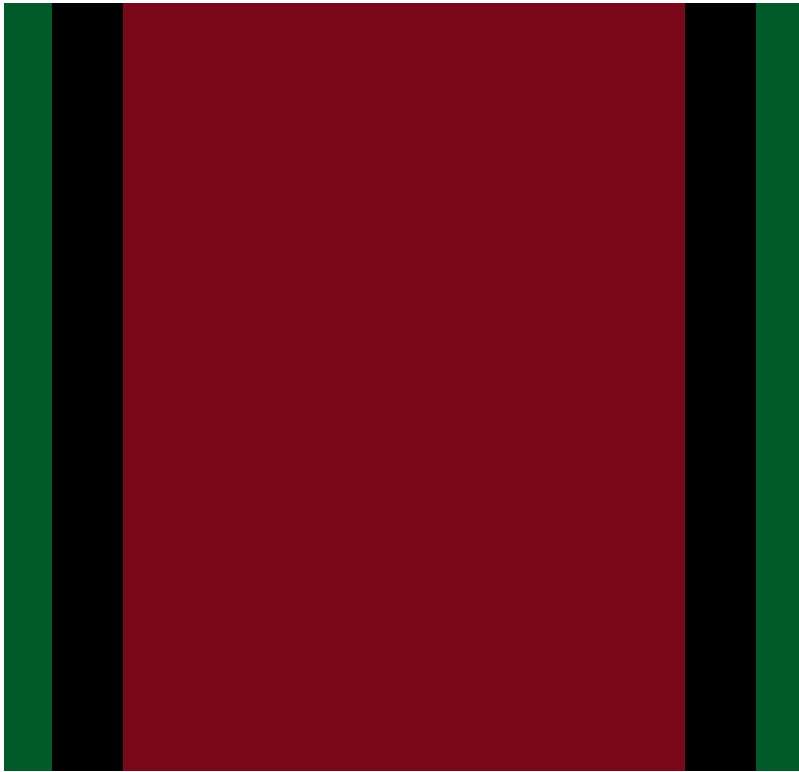
- Cubed numbers are numbers multiplied by themselves 3 times.
- $5 \times 5 \times 5 = 125$
- $5 \times 5 = 25 \times 5 = 125$
- The pattern is 1, 8, 27, 64, 125, 216, 343, 512, 729, 1000 etc

Symmetry



- Reflective symmetry is it the same both sides.
- Rotational symmetry is how many time it will fit in the shape as you rotate it around.

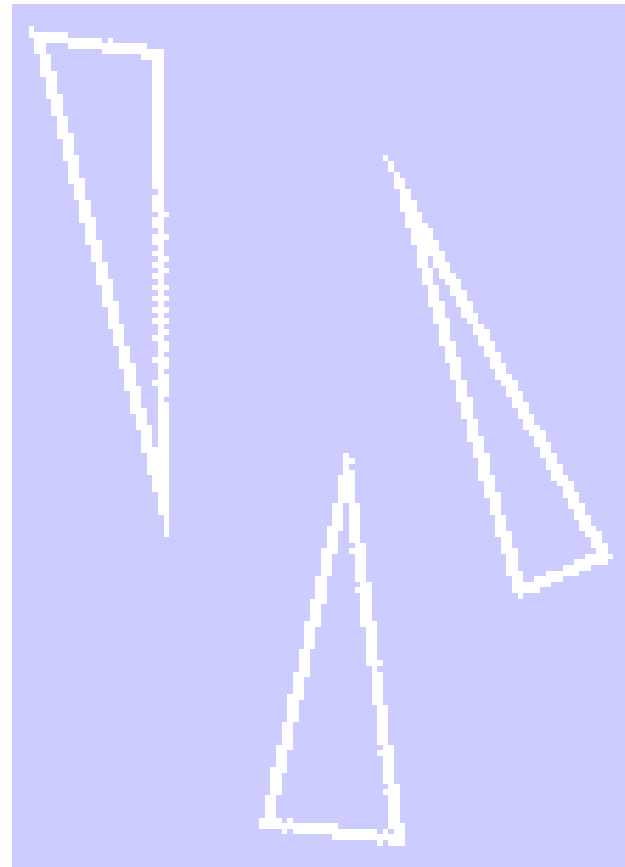
Shapes



- Rhombus is a pushed over square and a parallelogram is a rectangle pushed over.
- Trapezium has a pair of parallel lines.
- Kite has two pairs of adjacent sides that are equal.

Triangles

- An equilateral triangle has three equal sides and all angles are 60 degrees.
- A right angled triangle has one right angle.
- An isosceles triangle has two sides and two angles equal.
- A scalene has all three sides and angles different.
- They may be a different way to what you normally see them.
- Turn the page around!



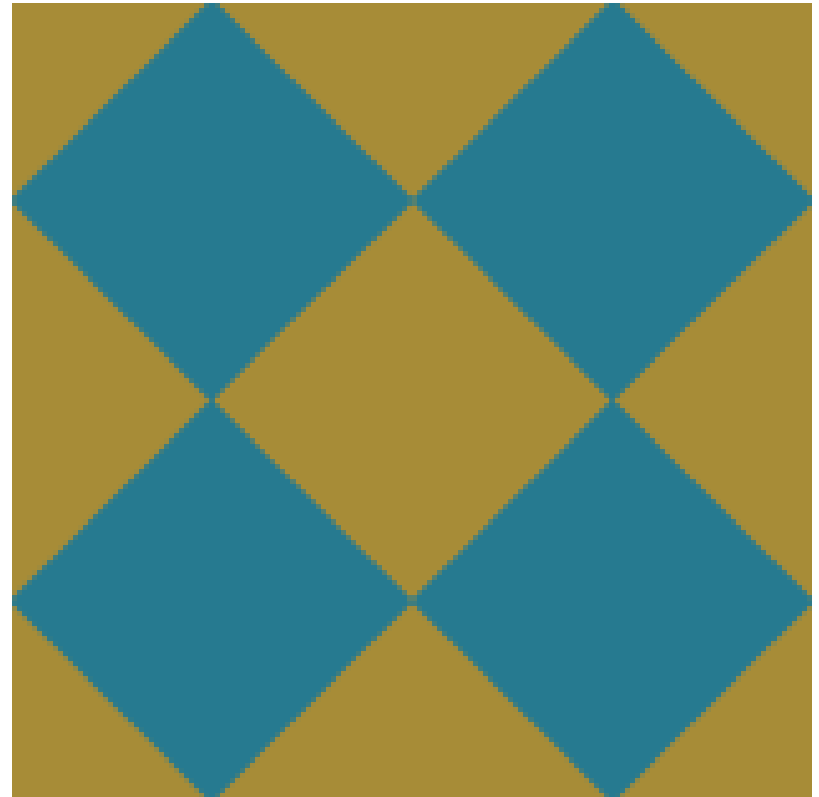
Shapes

- 3 sides triangle
- 4 sides rectangle, square, quadrilateral, parallelogram, rhombus, trapezium, kite
- 5 sides pentagon
- 6 sides hexagon
- 7 sides heptagon
- 8 sides octagon
- Shapes can be regular or irregular



Congruence

- Congruent means the same.
- If two shapes are congruent it means they are the same size and shape.
- They have just been rotated.

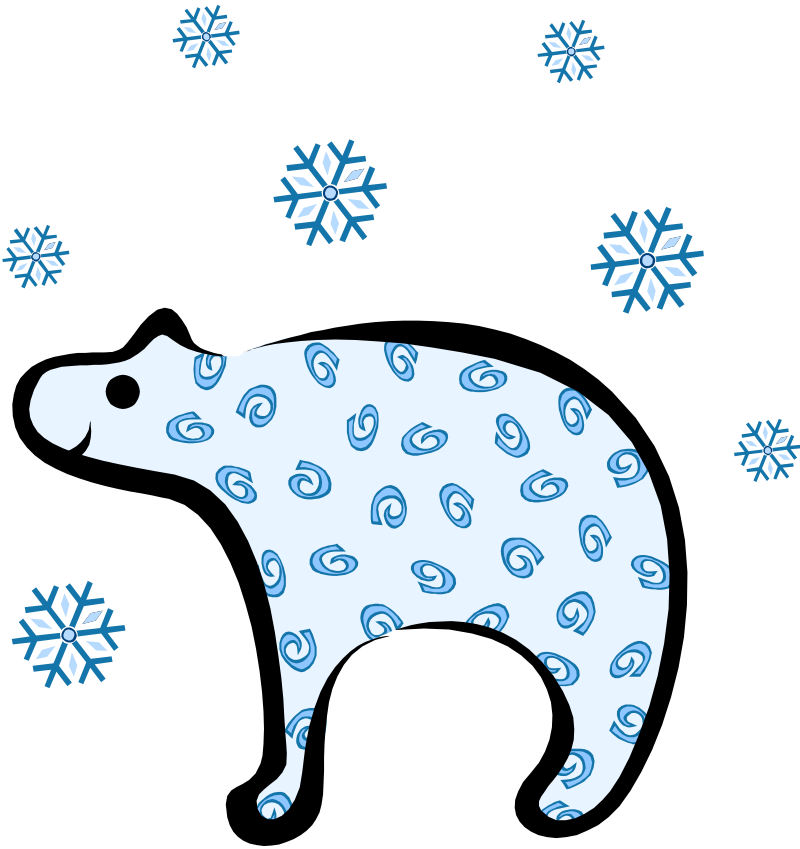


Time

- Remember to read the time carefully off a clock.
- The short hand is the hour hand.
- The long hand is the minute hand.
- Remember if you add time eg 4.45 and 20 mins you do not get 4.65 because you are into the next hour.



Negative numbers



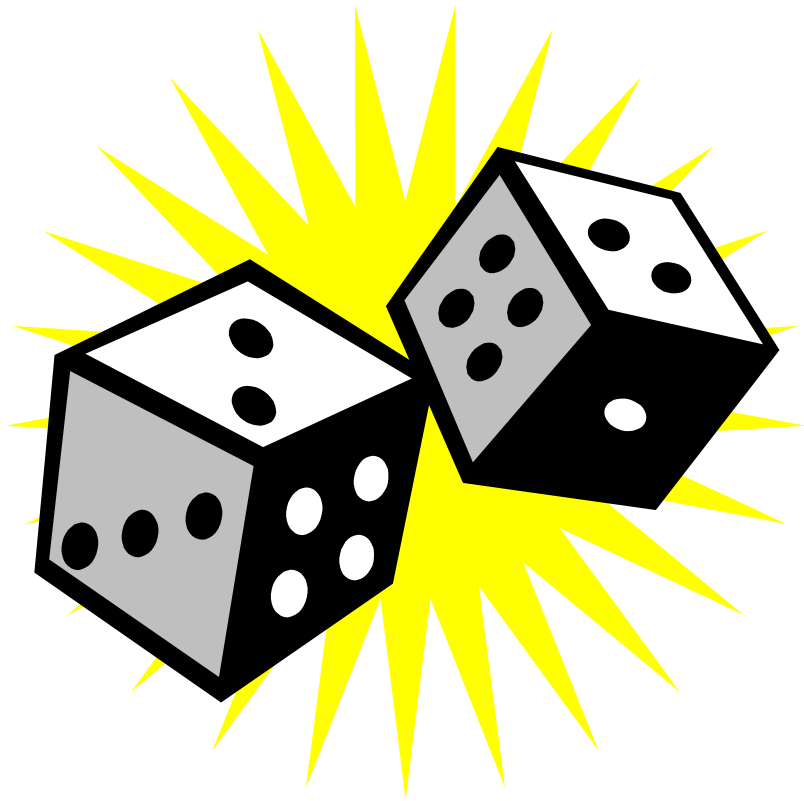
- Negative numbers go before 0 and are -1 , -2 etc.
- If you have a temperature of -5 and it rises 2 degrees you will now be at -3 .

Angles



- From 1-89 is acute.
- 90 is a right angle
- From 91-179 is obtuse
- 180 is a straight line
- 181+ is a reflex
- Estimate and read the protractor carefully.

Probability



From 0 to 1.

If it is 0 it can't happen no chance.

Quarter or 0.25 is not very likely

0.5 or half or evens could go either way

0.75 is very likely and 1 is certain.

The chance of getting a head is a equal chance or half and the chance of getting a six is 1 out of 6.

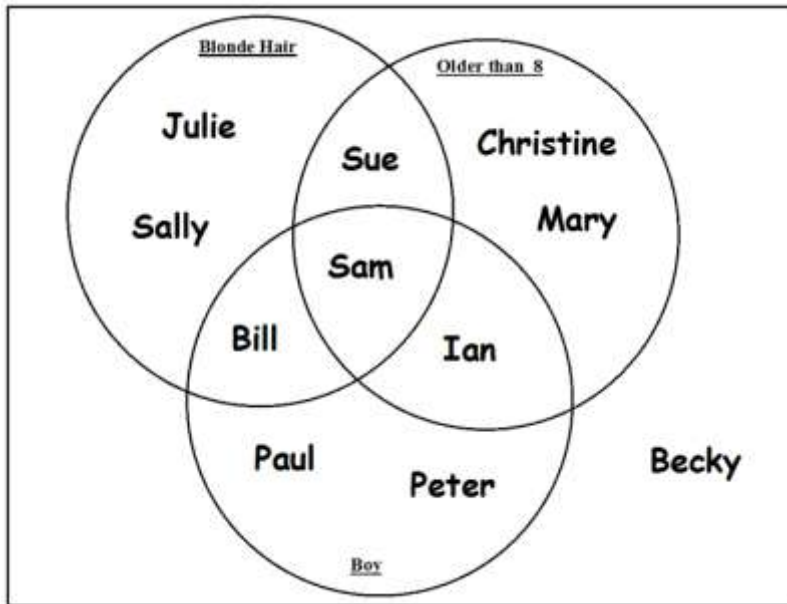
Probability Problems



- A bag contains 11 blue balls and 3 green and 6 red. What is probability of getting a red?
- There are 6 reds out of 20 so the answer is 6 out of 20.

Venn diagrams

- A Venn diagram is a diagram that uses circles to illustrate the relationships among sets.



Carroll diagrams

- A Carroll Diagram is a diagram used to sort objects and numbers, based on certain properties

	Prime	Not prime
Even	2	4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26
Not even	3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41	1, 9, 15, 21, 25, 27, 33, 35, 39, 41, 45, 49

Brackets

- If you see brackets do that calculation first.

