Y9 PRIORITY KNOWLEDGE / LITERACY (PYTHAGORAS)
(LEARN THIS KEY INFORMATION FROM PREVIOUS YEARS)

LITERACY IN MATHS
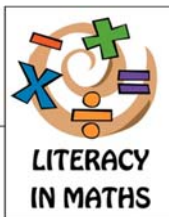
1.	A **ratio** is the relationship between two or more numbers that are separated by a colon $2:3$
2.	An **improper fraction** is a 'top-heavy' fraction, the numerator is larger than the denominator. For example, $\frac{9}{4}$
3.	A **mixed number** is a number made up of whole's and fractional parts. For example, $5\frac{3}{7}$
4.	**Similar** shapes in maths are enlargements of each other, their lengths are in direct proportion. (Angles remain the same in similar shapes)
5.	A **scale factor** tells us what multiplier has been used to enlarge a shape (remember enlargements can get smaller too, with scale factors between 0 and 1)
6.	A **coordinate** is used to identify a location on a grid. We give the x-value first, then the y-value, and it is written in brackets.

7.	To **multiply fractions** together, multiply the numerators together and the denominators together.
8.	We use a **scatter graph** to see if two things have a relationship.
9.	**Continuous** data can take any value, often it will be a measurement.
10.	**Discrete** data can only take certain values, like shoe sizes.
11.	**Qualitative** data use words instead of numbers, like someone's favourite colour.
12.	A **sequence** is a set of numbers that follow a rule to get from one number to the next.
13.	A **formula** is a rule written using symbols that represents different amounts. For example, the area of a triangle can be found with the formula $A = \frac{bh}{2}$
14.	An **expression** is a collection of algebraic terms that are being added or subtracted together.
15.	An **equation** shows that two things are equal.
16.	An **identity** is true no matter what values are chosen. For example, $3(x + 5) \equiv 3x + 15$. $\equiv$ is the mathematical symbol for an identity.

| 17.	To **expand** an expression means to multiply out the brackets. Expand the following expression $3(x - 9)$		
		x	- 9
	3	3x	-27
	Final Ans: $3x - 27$		

18.	**Inequalities…**
	Greater than $>$ Greater than or equal to $\geq$
	Less than $<$ Less than or equal to $\leq$

19. Know these key equivalent fractions, decimals and percentages…

Fraction	Decimal	Percentage
$\frac{1}{1}$	1	100
$\frac{1}{2}$	0.5	50
$\frac{1}{4}$	0.25	25
$\frac{1}{5}$	0.2	20
$\frac{1}{10}$	0.1	10
$\frac{1}{20}$	0.05	5
$\frac{1}{100}$	0.01	1

20.	**Area** of a **parallelogram and rectangle**… $A = bh$
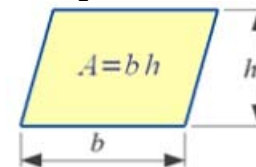
21.	**Area** of a **triangle**… $A = \frac{1}{2}bh$
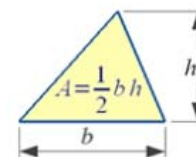
22.	The **range** is the largest number subtract the smallest number.
23.	The **mode** is the most common number.
24.	The **median** is the middle number, when put in order.
25.	The **mean** is the total of all the numbers divided by the amount of numbers.