LITERACY MAT
Year 7 Mathematics

ST BERNARD'S HIGH SCHOOL

LOVE ONE ANOTHER AS I HAVE LOVED YOU

KEY
VOCABULARY

Area	The space inside a 2D shape.
Perimeter	The distance around the outside of a shape.
Circumference	The perimeter of a circle.
Radius	A line from the centre of a circle to the circumference.
Diameter	A line from one side of a circle to the other side that goes through the middle.
Volume	The space inside a 3D shape.
Factors	Numbers or variables that you can divide a number by without remainder.
Multiples	Numbers of the times table of a number.
Variable	An unknown number label as a letter E.g. x
Term	A product of one or more variables and/or numbers.
Gradient	The steepness of a line.
Standard Form	A way of writing very small or large numbers using the power of 10 to make them easier to compare.
Trapezium	A quadrilateral with exactly one set of parallel lines.
Parallelogram	A quadrilateral with exactly two sets of parallel lines.
Mode average	The most common number.
Median average	The middle number (when paced in order).
Mean average	A group of numbers added together, the answer is divided by how many numbers there are.
Range	The biggest number – the smallest number.
Expression	A collection of terms for example, 3x + 4y + 8
Equation	You solve this by finding the value of a missing letter, for example, 5x + 7 = 42
Formula	A rule written with mathematic symbols, for example, $a^2+b^2=c^2$
Quadrilateral	A four-sided 2D shape.
Linear	A straight line.
Probability	The chance of something happening.
Ratio	Shows how much of one thing there is compared to another, for example, 3:7
Polygon	A 2D shape with at least 3 straight edges.
Interest	A percentage that is paid for borrowing money.
Pythagoras	A mathematician who discovered that the relationship in right angle triangle sides is $a^2+ b^2= c^2$
Mutually Exclusive	Two events that cannot happen at the same time.
Correlation	The link between data.
Congruent	Two shapes that are the identical.
Scale Factor	The number that has been used to multiply a shape in order to make it bigger or smaller.
Data	Information collected to be examined, such as the assessment results of a class.
Prism	A 3D shape where two ends are congruent, like a Toblerone box.
Cylinder	A circular prism (or a Non-Polyhedral Prism).

COMMAND
WORDS

Calculate	A calculator and some working will be needed.
Change	Usually convert from one unit to another; either using known metric unit conversions or the use of a conversion graph.
Complete	Fill in missing values.
Describe	Write a sentence that gives the features of the situation.
Draw	Produce an accurate drawing (unless a sketch is being drawn).
Sketch	Produce a drawing that does not have to be drawn to scale or a graph that is drawn without working out each coordinate.
Expand	Remove Bracket.
Expand and simplify	Remove brackets and the collect like terms.
Explain	Write a sentence or a mathematical statement to show how you got to your answer or reached your conclusion.
Express	Re-write in another form, some working may be needed.
Factorise	Insert brackets by taking out common factors.
Fully factorise	Insert brackets by taking out all the common factors.
Find	Some working will be needed to get to the final answer.
Give a reason	Must be clear and accurate reasons. If the reasons are geometrical then make sure you: - provide a reason for each stage of working (if required), - use correct geometric terminology
Justify	Show all working and/or give a written explanation.
Prove	More formal than 'show', all steps must be present. In the case of a geometrical proof, reasons must be given.
Show	All working needed to get to a given answer or complete a diagram to show given information.
Simplify	Simplify the given expression.
Simplify fully	Simplify the given expression. Answer must be given in its simplest form.
Solve	Find the solution of an equation or inequality.
Solve Algebraically	Find the solution of an equation or inequality; algebraic manipulation must be shown.
Write down	No working out is needed
Write	No working needed for 1 mark questions. Working may be needed questions with more than 1 mark.
Work out	Some working will be needed to get the answer.

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Times Tables

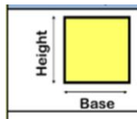
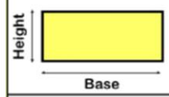
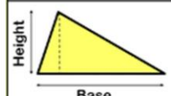
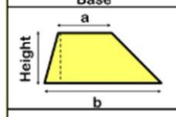
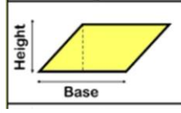
1×1=1	1×2=2	1×3=3	1×4=4	1×5=5	1×6=6
2×1=2	2×2=4	2×3=6	2×4=8	2×5=10	2×6=12
3×1=3	3×2=6	3×3=9	3×4=12	3×5=15	3×6=18
4×1=4	4×2=8	4×3=12	4×4=16	4×5=20	4×6=24
5×1=5	5×2=10	5×3=15	5×4=20	5×5=25	5×6=30
6×1=6	6×2=12	6×3=18	6×4=24	6×5=30	6×6=36
7×1=7	7×2=14	7×3=21	7×4=28	7×5=35	7×6=42
8×1=8	8×2=16	8×3=24	8×4=32	8×5=40	8×6=48
9×1=9	9×2=18	9×3=27	9×4=36	9×5=45	9×6=54
10×1=10	10×2=20	10×3=30	10×4=40	10×5=50	10×6=60
11×1=11	11×2=22	11×3=33	11×4=44	11×5=55	11×6=66
12×1=12	12×2=24	12×3=36	12×4=48	12×5=60	12×6=72

1×7=7	1×8=8	1×9=9	1×10=10	1×11=11	1×12=12
2×7=14	2×8=16	2×9=18	2×10=20	2×11=22	2×12=24
3×7=21	3×8=24	3×9=27	3×10=30	3×11=33	3×12=36
4×7=28	4×8=32	4×9=36	4×10=40	4×11=44	4×12=48
5×7=35	5×8=40	5×9=45	5×10=50	5×11=55	5×12=60
6×7=42	6×8=48	6×9=54	6×10=60	6×11=66	6×12=72
7×7=49	7×8=56	7×9=63	7×10=70	7×11=77	7×12=84
8×7=56	8×8=64	8×9=72	8×10=80	8×11=88	8×12=96
9×7=63	9×8=72	9×9=81	9×10=90	9×11=99	9×12=108
10×7=70	10×8=80	10×9=90	10×10=100	10×11=110	10×12=120
11×7=77	11×8=88	11×9=99	11×10=110	11×11=121	11×12=132
12×7=84	12×8=96	12×9=108	12×10=120	12×11=132	12×12=144

Fractions/ Decimals and Percentages

Decimal	Percentage	Fraction
0.5	50%	$\frac{1}{2}$
0.25	25%	$\frac{1}{4}$
0.75	75%	$\frac{3}{4}$
0.2	20%	$\frac{1}{5}$
0.1	10%	$\frac{1}{10}$
$0.\dot{3}$	$33.\dot{3}\%$	$\frac{1}{3}$

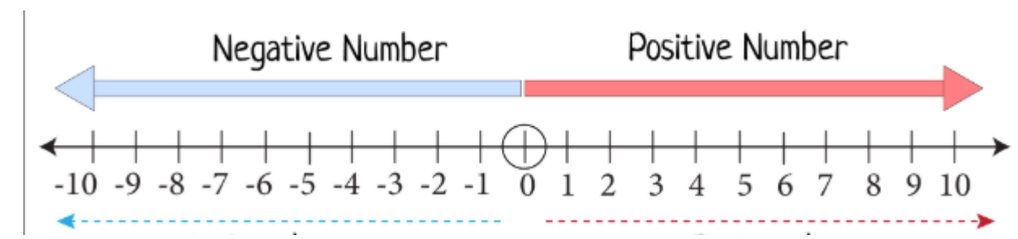
Area

	Square	Base x Height
	Rectangle	Base x Height
	Triangle	Base x Perpendicular Height ÷ 2
	Trapezium	$\frac{(a+b) \times \text{height}}{2}$
	Parallelogram	Base x Perpendicular Height

Rounding

Prime Numbers

1	**2**	**3**	4	**5**	6	**7**	8	**9**	10
11	12	**13**	14	15	16	**17**	18	**19**	20
21	22	**23**	24	25	26	27	28	**29**	30
31	32	33	34	35	36	**37**	38	39	40
41	42	**43**	44	45	46	**47**	48	49	50
51	52	**53**	54	55	56	57	58	**59**	60
61	62	63	64	65	66	**67**	68	69	70
71	72	**73**	74	75	76	77	78	**79**	80
81	82	**83**	84	85	86	87	88	**89**	90
91	92	93	94	95	96	**97**	98	99	100



BIDMAS

B	Brackets	10 × (4 + 2) = 10 × 6 = 60
I	Indices	$5 + 2^2 = 5 + 4 = 9$
D	Division	10 ÷ 6 ÷ 2 = 10 ÷ 3 = 13
M	Multiplication	10 - 4 × 2 = 10 - 8 = 2
A	Addition	10 × 4 + 7 = 40 + 7 = 47
S	Subtraction	10 ÷ 2 - 3 = 5 - 3 = 2