

Unit A

YEAR 10: CORE: ASSESSING MY PROGRESS

UNIT TEST:

Colour the 1st column green if you can do it in class, orange if you can do some, red if you feel you cannot understand any.

Tick the 2nd column when you've written your Book of Power notes.

The codes in the 3rd column are for the **GCSE New 2015 Spec section on www.mathswatchvle.com**

I can add and subtract whole numbers & decimals in my head	17,18	I can simplify like terms e.g. Simplify $2a + 3b - 5a - b + 4$	33
I can multiply and divide numbers by 10, 100, 1000	30	I can simplify (multiplying)	34
I can add and subtract decimals (written methods)	17	I can simplify (dividing)	35
I can multiply integers and decimals	19,66	I can expand single brackets e.g. Expand $3(2x - 5y)$	93
I can divide integers and decimals	20,67	I can expand expressions involving single brackets and simplify e.g. Expand and simplify $2 + 3(5x - 6)$	134
I know why \times and \div by numbers between 0 & 1 is a special case	BOP		
I can add, subtract, multiply & divide negative numbers	68	I can expand double brackets and simplify my answer	134
I can do long multiplication	BOP	I can factorise into a single bracket	94
I can do long division	BOP	I can factorise quadratics (into double brackets)	157
I can use a multiplication sum, to work out facts i.e. I'm given $32 \times 18 = 576$, I can do $57.6 \div 180$	92	I recognise & use difference of two squares	158
		I can recognise surd notation on a calculator	BOP
I know what BIDMAS stands for & can use it	75	I can use the rules of indices	131
I can round numbers to the nearest integer, 10, 100 etc.	31	I can measure & draw lines and angles accurately	46
I can round numbers to 1, 2, 3 decimal places.	32	I can calculate the volume and surface area of spheres	169
I can round numbers to 1, 2, 3 significant figures	90	I can calculate the volume and surface area of pyramids	170
I can work out upper and lower bounds	132	I can calculate the volume and surface area of cones	171
I can write error intervals	155	I can compare sets of data using the mean and range	62
I know ab means $a \times b$	7	I can compare the mean from a list with the mean from a frequency table	62
I know $3y$ means $y + y + y$ and also means $3y$	7		130
I know a^2 means $a \times a$ and a^3 means $a \times a \times a$	7	I can do a random sample (and memorised the definition)	152
I know a^2b means $a \times a \times b$	7	I can do a stratified sample questions	176
I know a/b means $a \div b$	7	I know "bigger sample = more reliable conclusions"	152

Unit B

YEAR 10 CORE: ASSESSING MY PROGRESS

Oct Half Term - Christmas

NOTE: *Italics* = skills we expect you to be able to do already, check you can do these, revise if you've forgotten them!

The numbers refer to the **GCSE New 2015 Spec** on www.mathswatchvle.com.

I understand place value in integers and decimals	1	I convert between seconds, minutes, hours and days	BOP
I can order integers (2), decimals (3) and fractions (70)	85	I can read scales on a range of measuring instruments	4
I can use $<$, \leq , $>$, \geq , $=$, \neq symbols when ordering	5	I can convert from one metric unit to another	112
I can use negative numbers on the number line	23	I can convert from one metric area unit to another	BOP
I can recognise equivalent fractions and use to compare	25	I can convert from one metric volume unit to another	BOP
I can simplify fractions	26	I can choose appropriate units for estimating	BOP
I can switch between improper fractions and mixed numbers	BOP	I can do average speed, distance and time calculations	142
I can add and subtract fractions, including mixed numbers	71	I can convert between metric speed measures	142
I can work out reciprocals of integers, fractions and decimals	76	I can use formulae to calculate speed and acceleration	142
I can multiply and divide integers by fractions	73,74	I can solve problems using compound measures, such as speed, rates of pay, density and pressure	142
I can multiply and divide fractions, including mixed numbers	73,74		
I can remember the main fraction-to-decimal equivalents	84	Design and use two-way tables	61
I can convert between other fractions and decimals	84	Use information given to complete a two-way table	61
I know that each terminating decimal is a fraction	BOP	I can produce and interpret pictograms	16
I can find a fraction of an amount	24,72	I produce & interpret bar charts	15
I can write one number as a fraction of another	BOP	I can produce and interpret composite bar charts	BOP
I can find percentages of an amount	86,87	I produce & interpret comparative & dual bar charts	BOP
I use decimals to calculate percentage or fraction of amounts	BOP	I can produce and interpret pie charts	128
I can use multipliers to increase or decrease by a percentage	BOP	I can produce and interpret time series	153
I can do calculations with money	22	I can draw and interpret a vertical line chart	64
I can substitute into formulae	95	I can fill in tally charts	15
I can substitute positive and negative numbers into expressions	95,68	I can design tables and data collection sheets	BOP
I can use formulae from maths AND other subjects	BOP	I produce & interpret stem-and-leaf diagrams...	BOP
I can rearrange/ change the subject of a formula	101,136	... and back-to-back stem-and-leaf diagrams	BOP
I can show inequalities on a number line	138	I can produce, use and interpret scatter graphs	129
I can solve inequalities	139	I can draw and use a line of best fit	129
I can solve equations	100,135	I understand extrapolation and interpolation	129
I can read solutions of equations from a graph	140		

Unit C

YEAR 10 CORE: ASSESSING MY PROGRESS

Just after Christmas - Feb Half Term

NOTE: *Italics* = skills we expect you to be able to do already, check you can do these, revise if you've forgotten them!

The numbers refer to the **GCSE section** on www.mathswatchvle.com

<i>I can convert fractions, decimals and percentages</i>	84,85	I can recognise and plot quadratic graphs	98
<i>I can work out percentages of amounts</i>	86,87	I can interpret roots, intercepts and turning points of quadratics from their graphs	160
<i>I can express on quantity as a percentage of another</i>	88,89		
<i>I can increase/decrease amounts by percentages</i>	108	I can recognise which shapes are congruent	12
<i>I can solve simple interest problems</i>	111	I can use the SSS, ASA, SAS, RHS rules for congruence	166
I can calculate compound interest and depreciation	164	I can use congruence to work out unknown angles and sides	166
I can calculate percentage change (% profit/loss)	109	I can recognise mathematically similar shapes	144
I can recognise and solve reverse percentage problems	110	I can use similarity to solve unknown angles and sides	144
I can find the co-ordinates of a midpoint of a line	133	I can name and recognise all 6 quadrilaterals	9
<i>I can draw, label and scale axis</i>	BOP	I know all the properties of a square and a rectangle	9
I can plot and name straight lines parallel to the axis	BOP	I know all the properties of a rhombus and a parallelogram	9
I can recognise, name and plot $y = x$ and $y = -x$	BOP	I know all the properties of a kite and a trapezium	9
I can complete x-y tables	96	I can reflect a shape & describe a reflection	48
I can plot straight line graphs from x-y tables	96	I can rotate a shape & describe a rotation	49
I can work out the intercept from a linear graph	159	I can translate shapes & describe translations using vectors	50
I can find the gradient from a straight line	97	I can enlarge a shape and describe an enlargement	148
I understand parallel lines have the same gradient	97	<i>I can calculate mean, mode, median, range from a list</i>	62
I can accurately draw a line with a given gradient	97	I can identify outliers	BOP
I understand what m and c mean in $y = mx + c$	159	I know the advantages and disadvantages of each average	62
I can sketch linear graphs, given the value of m and c	159	I can compare sets of data using the mean and range	62
I can find the equation of a straight line from the graph	159	I can solve problems using averages and range	BOP
I can find equation of line given gradient and a point	159	I can calculate the averages & range from frequency tables	130
I can find equation of line given two points	159	I can estimate the mean and range for grouped data	130
I can draw and interpret cubic graphs	161	I can name the modal class	130
I can draw and interpret reciprocal graphs ($y = 1/x$)	161	I can name the class interval containing the median	130

Unit D

YEAR 10 CORE: ASSESSING MY PROGRESS

Feb Half Term - Easter

NOTE: *Italics* = skills we expect you to be able to do already, check you can do these, revise if you've forgotten them!

The numbers refer to the **GCSE Section** on www.mathswatchvle.com.

<i>I understand how ratios are written</i>	38	I can work out the perimeter of 2D shapes	52
<i>I can simplify ratios</i>	38	I can calculate the area of composite shapes	53
<i>I understand the link between ratios and fractions</i>	107	I recognise the difference between an expression, formulae, identity and equation	5
<i>I can solve proportion recipe type questions</i>	39		
<i>I can share quantities in given ratio</i>	106	I understand when to use \neq and \equiv symbols	5
<i>I can use ratios to solve problems</i>	107	I can write expressions or equations to solve problems	137
I can solve simultaneous equations graphically	140	I can calculate volume of a sphere	169
I can solve linear simultaneous equations	162	I can calculate volume of a pyramid	170
I can write a pair of simultaneous equations to solve a word problem and interpret the solution in context	137	I can calculate volume of a cone	171
	BOP	I can calculate volumes of shapes made up from these	BOP
I can name these parts of a circle: centre, radius, chord, diameter, circumference, arc, sector, segment	116	I can calculate the surface area of a sphere	169
		I can calculate the surface area of a pyramid	170
I have memorised the circle formulae (area & circumference)		I can calculate the surface area of a cone	171
<i>I can calculate the circumference of a circle</i>	118	I calculate the surface area of shapes made from these	BOP
I can solve problems involving circumference of circles	118	<i>I understand likelihood and the probability scale</i>	14
I can work out percentage error intervals	155	<i>I can give probability as fraction, decimal or percentage</i>	59,85
<i>I can calculate the area of a circle</i>	117	<i>I can calculate the probability of an event</i>	59
I can calculate radius or diameter, given area (of circle)	117	I can calculate relative frequency	125
I can calculate the area and perimeter of composite shapes which include parts of circles	BOP	I predict using experimental data (expected frequency)	125
		I understand more trials = more reliable results	125
I can express circumference or area in terms of π	117-8	I compare theoretical probability to experimental data	125

Unit E

YEAR 10 Core: ASSESSING MY PROGRESS

Just after Easter - May Half Term

NOTE: *Italics* = skills we expect you to be able to do already, check you can do these, revise if you've forgotten them!

The numbers refer to the **GCSE Section** on www.vle.mathswatch.co.uk/vle

I know the first 15 square & first 6 cube numbers	81	I can simplify using the 3 rules of indices	82/131
I can work out both square roots of a number	81	I use Pythagoras' Theorem to calculate unknown sides	150
I can find the cube root of a number.	81	I can solve problems using Pythagoras' Theorem	150
I can use a calculator to find square roots & cube roots	81	I use trigonometry to calculate an unknown sides	168
I recognise surd answers on my calculator	81	I use trigonometry to calculate an unknown angles	168
I can evaluate powers without a calculator	82	I can solve problems using trigonometry	168
I understand zero and negative powers	BOP	I recognise when to use Pythagoras and when to use trigonometry	150
I recognise powers of 2, 3, 4 and 5	82		168
I can use the power buttons on my calculator	BOP	I can systematically list possible outcomes of an event	58
I can write large numbers into standard form and back	83	I calculate probabilities as fractions/decimals/percent	59
I can write small numbers into standard form and back	83	I can draw a sample space diagram /possibility space and use to calculate probability	126
I can \times and \div numbers in standard form	83		
I can $+$ and $-$ numbers in standard form	83	I understand "mutually exclusive"	60
I can use a calculator for standard form	83	I understand "exhaustive outcomes"	BOP
I can expand and simplify expressions with single bracket	93,134	I can complete two-way tables & apply to probability	61
Expand & simplify double brackets	134	I can use Venn diagrams to calculate probability	127
<i>I can factorise into single brackets</i>	94	I understand the language of sets and Venn diagrams	127
I can factorise quadratic expressions	157	I complete frequency trees & apply to probability	57
I can factorise using difference of two squares	158	I can complete tree diagrams for independent events	151
I can solve quadratic equations using factorising	157	I complete tree diagrams to calculate dependent events	175
I can read approximate solutions to quadratics from a graph	140	I understand when events are independent	BOP
I understand when to use the \neq and \equiv signs	5		