

Date (week commencing)	Numbers to learn
01/11/21	5.1 – 5.8 3.1 – 3.3 4.1
08/11/21	5.1 – 6.4
15/11/21	6.1 – 6.7    2.1 – 2.3
22/11/21	5.1 – 6.7
29/11/21	1.1 – 2.6    5.1 – 5.8
06/12/21	2.7 – 4.5    6.1 – 6.7
13/12/21	1.1 – 6.7

### ***Learning means...***

I am using look >> cover >> write >> check at least twice for this week's facts

and/or

I made flash cards ( "Question" on one side and "Answer" on the other) for the facts and got someone to test me on them at least twice

### ***so that...***

I achieve the minimum score of 8/10 on the quiz

## Unit 5 - sequences

No.	Question	Answer
5.1	Linear/arithmetic sequence	A number pattern which increases or decreases by the same amount each time
5.2	Common difference	The amount the sequence increases or decreases by between each term
5.3	Geometric sequence	A number pattern that uses multiplication between each term
5.4	Term (sequence)	A number in a sequence
5.5	The nth term	The general rule for a number pattern
5.6	n (sequence)	The term number in the sequence e.g. when $n = 10$ , this is the 10 <sup>th</sup> term in the sequence
5.7	The first 10 square numbers are	1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144
5.8	The first 5 cube numbers are	1, 8, 27, 64, 125

## Unit 6 – expanding and factorising

No.	Question	Answer	Example
6.1	Like Terms	Terms that have the same variables, and each variable has the same index	$2x^2y$ and $4x^2y$ $2xy$ and $4xy$
6.2	Simplify	Rewrite the expression in an easier to remember form.	Collect like terms Cancel down algebraic fractions
6.3	Expand	Multiply everything inside the bracket by the value in front of the bracket	$2(x + 4) \equiv 2x + 8$
6.4	Factorise	Find a common factor of each term and put the brackets back in	$2x + 8 \equiv 2(x + 4)$ $2x^2 + 4x \equiv 2x(x + 4)$
6.5	Solve	Find the unknown letter	$2x + 1 = 7$ $2x = 6$ $x = 3$
6.6	Subject	The variable on its own that the rest is “equal to”	$a = 2b + c$ $a = \text{the subject}$
6.7	Rearrange	Make the given letter the subject	Make $b$ the subject $a = 2b + c$ $\frac{a - c}{2} = b$ $b$ is now the subject because it's on its own on one side of the equals sign

## Unit 1 - coordinates

No.	Question	Answer	Example
1.1	Coordinates are always	(x, y)	
1.2	Midpoint of a line segment	$\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right)$	

## Unit 3 - proportion

No.	Question	Answer	Example
3.1	Direct proportion	As one variable increases, the other variable increases	
3.2	Inverse proportion	As one variable increases, the other variable decreases	
3.3	The unitary method	Find one first	

## Unit 4 – standard form

No.	Question	Answer	Example
4.1	Standard form	A way of writing very big or very small numbers using powers of 10	4,000,000 is $4 \times 10^6$
4.2	$10^{-3}$	0.001	
4.3	$10^{-2}$	0.01	
4.4	$10^{-1}$	0.1	
4.5	$10^0$	1	
4.6	$10^1$	10	
4.7	$10^2$	100	
4.8	$10^3$	1000	

## Unit 2 – $y = mx + c$

No.	Question	Answer	Example
2.1	Vertical lines are always	$x = \dots$ where all the x coordinates are the same	
2.2	Horizontal lines are always	$y = \dots$ where all the y coordinates are the same	
2.3	m	Gradient	<p>Example: <math>y = 2x - 4</math></p>
2.4	To find the gradient	$\frac{\text{Difference in } y}{\text{Difference in } x} = \frac{y_2 - y_1}{x_2 - x_1}$	
2.5	c	Y intercept	
2.6	To find the y-intercept	The y coordinate when $x = 0$ This is where the line crosses the y axis	
2.7	Parallel lines	Have the same gradient	
2.8	Perpendicular lines	$-\frac{1}{\text{gradient}}$	