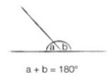
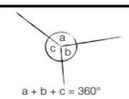
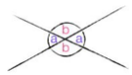
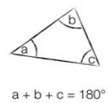
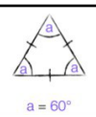
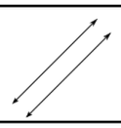
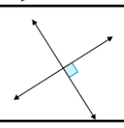
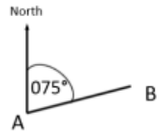
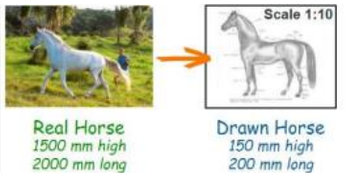
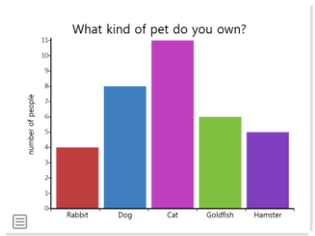
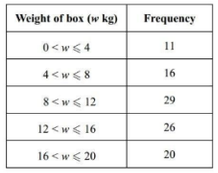
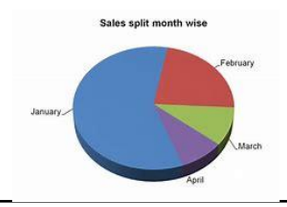
Unit 11 – angles			
No.	**Question**	**Answer**	**Example**
11.1	What is an angle less than 90°?	Acute	
11.2	What is an angle between 90° and 180°?	Obtuse	
11.3	What is an angle greater than 180°?	Reflex	
11.4	What is a right angle?	90°	
11.5	Adjacent angles on a straight line sum to…	180°	
11.6	Angles around a point sum to…	360°	
11.7	Vertically opposite angles are…	Equal	
11.8	Interior angles in a triangle…	sum to 180°	
11.9	Interior angles in a quadrilateral…	sum to 360°	
11.10	All angles in an equilateral triangle…	are 60°	
11.11	Alternate angles…	are equal	
11.12	Corresponding angles…	are equal	
11.13	Co-interior angles…	add up to 180	
11.14	What does parallel mean?	2 lines at an equal distance apart that will never intersect	
11.15	What does perpendicular mean?	2 lines that meet at a 90° angle	

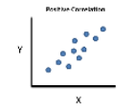
Unit 12 – Bearings			
No.	**Question**	**Answer**	**Example**
12.1	Bearings	1. Measure from North (draw a North line) 2. Measure clockwise Your answer must have 3 digits (e.g., 047°)	
12.2	Scale	The ratio of the length in a model to the length of the real thing.	
12.3	Scale (Map)	The ratio of a distance on the map to the actual distance in real life	

Date (week commencing)	Numbers to learn
25/04/22	11.1-11.10
02/05/22	11.9-12.3
09/05/22	11.1-12.3
16/02/22	(Spring 2) 7.1 to 8.3
23/02/22	(Spring 2) 7.1 to 8.3 (summer 1) 11.1-12.3

Year 8 – Maths – Spring 2

Unit 9 – presenting data			
No.	**Question**	**Answer**	**Example**
9.1	What three things must a pictogram include?	• A heading column • A sensible picture • A key	
9.2	What four things must a bar chart have?	• A y-axis representing frequency • A x-axis representing the groups • The bars must be the same width • The axis must go up in equal increments	
9.3	What must grouped frequency tables include?	• A heading column • A frequency column • Sometimes a tally column	
9.4	How many degrees in a pie chart?	360°	
9.5	How do you calculate each angle in a pie chart?	Divide by the total frequency and multiply by 360	

Unit 9 – interpreting data			
No.	**Question**	**Answer**	**Example**
9.6	How do you calculate the mean?	Add up all the data sets Divide by how many pieces of data there are	6, 3, 4, 7 $\frac{6+3+4+7}{4} = 5$
9.7	How do you calculate the median?	Put all the data in ascending order and find the middle value.	7, 2, 4, 8, 3, 9, 1 1, 2, 3, **4**, 7, 8, 9 4 is the median as it is in the middle
9.8	How do you calculate the mode?	Find the value that occurs the most	7, 2, 4, 8, 3, 9, 1, 9, 9 9 is the mode as it appears the most
9.9	How do you calculate the range?	Subtract the smallest value from the largest	7, 2, 4, 8, 3, 9, 1, 9, 9 9 – 1 = 8 therefore 8 is the range

Unit 10- Bivariate data		
No.	**Question**	**Answer**
10.1	What does positive correlation mean?	As one variable <u>increases</u> the other variable <u>increases</u>, this looks like: 
10.2	What does negative correlation mean?	As one variable <u>increases</u> the other variable <u>decreases</u>, this looks like: 
10.3	What does no correlation mean?	There is <u>no relationship</u> between the two variables, this looks like: 
10.4	What is a line of best fit?	A straight line drawn with a ruler that goes through the data with roughly the same number of points on each side of the line
10.5	What does interpolation mean?	Estimating a value within a given data set
10.6	What does extrapolation mean?	Estimating a value outside the give date set by assuming a trend

Date (week commencing)	Numbers to learn
28th Feb	**9.1 to 10.1**
7th Mar	**9.1 to 10.6**
14th Mar	**9.1 to 10.6**
21st Mar	**9.1 to 10.6 and 7.1 to 8.3**
28th Mar	**9.1 to 10.6 and 7.1 to 8.3**
4th Apr	**9.1 to 10.6 and 7.1 to 8.3**

Year 8 – Maths – Spring 1

Unit 6 - ratio

No.	Question	Answer	Example
6.1	How do you represent a ratio?	1. Count how many of each part you're given 2. Write it as a ratio in the order specified.	Represent the following as a ratio Black : White 5 : 3
6.2	How do you represent a ratio as a fraction?	1. Add the total number of parts together 2. Each part of the ratio represents the numerator	2:3 as a fraction $2 + 3 = 5$ $\frac{2}{5}\ and\ \frac{3}{5}$
6.3	How do you divide a quantity into a ratio?	1. Divide the quantity by the total number of parts 2. Multiply by the number of parts in each share of the ratio	20 shared into the ratio 2:3 $2 + 3 = 5$ $20 \div 5 = 4\ (1\ share)$ $4 \times 2 = 8$ $4 \times 3 = 12$
6.4	Speed = …	Speed= $\frac{distance}{time}$	Distance = 70m, time = 2 hours $S = \frac{70}{2}$ $S = 35m/h$

Date (week commencing)	Numbers to learn
4 th Jan	6.1-8.3
10th Jan	6.1-8.3 & 4.2-4.6
17th Jan	6.1-8.3 & 4.2-4.6
24th Jan	6.1-8.3 & 5.1-5.6
31st Jan	6.1-8.3 & 5.1-5.6
7th Feb	6.1-8.3 & 5.7-5.15
14th Feb	6.1-8.3 & 5.7-5.15

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

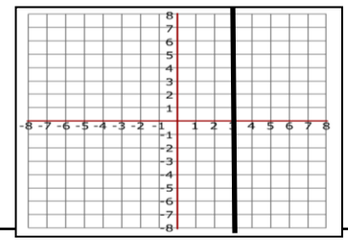
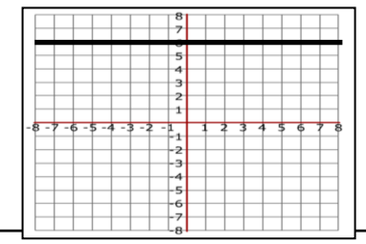
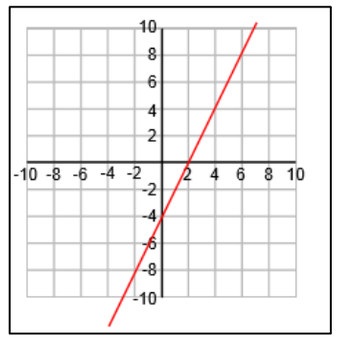
and/or

I used Quizlet to practise the fact for 5 minutes everyday.

so that…

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

Unit 7 – linear graphs and rate

No.	Question	Answer	Example
7.1	Vertical lines are always	x = n where all the x coordinates are the same	 x = 3
7.2	Horizontal lines are always	y = n where all the y coordinates are the same	 y = 6
7.3	Plot Y= 2x -4	Choose appropriate X coordinates, multiply by 2 and subtract 4 to find y coordinates. Then plot and join with a line.	

x	-2	0	2	4	6
y	-8	-4	0	4	8

Unit 8- direct and inverse proportion

No.	Question	Answer	Example
8.1	Direct proportion	As one variable increases, the other variable increases	If you work 2 hours you get paid £40 If you work 3 hours you get paid £60
8.2	Indirect proportion	As one variable increases, the other variable decreases	As speed goes up, travel time goes down And as speed goes down, travel time goes up
8.3	The unitary method	Find one first	

Year 8 – Maths – Autumn 2

Unit 4 – negative numbers		
No.	**Question**	**Answer**
4.1	Positive Number	Any number greater than zero
4.2	Negative Number	Any number smaller than zero
4.3	Positive X Positive =	Positive
4.4	Positive X Negative =	Negative
4.5	Negative X Positive =	Negative
4.6	Negative X Negative =	Positive

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

and/or

I used Quizlet to practise the fact for 5 minutes everyday.

so that…

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

REMEMBER: I don't need to learn the clarifications and examples (in brackets)!

Unit 5 - equations		
No.	**Question**	**Answer**
5.1	Variable	A symbol (usually a letter) used to represent an unknown value e.g. x
.2	Term (algebra)	Each part of an expression separated by a + or – (e.g. in $x^2 - 2x + 4$, $x^2, 4\ and\ -2x\ are\ the\ terms$)
5.3	Constant	A term that does not contain a variable
5.4	Expression	A value written using at least one variable (e.g. 3b or 5t – 9s)
5.5	Equation	An expression shown to be equal to another value (e.g. 3b = 50 or 5t – 9s = 10t – 9s – 7)
5.6	Coefficient	The number in front of the variable (e.g. for 2x, 2 is the coefficient of x)
5.7	Substitute	Replace the variable with something else
5.8	Solve	Calculate the value of the variable
5.9	Like Terms	Terms that have the same letter and same index (e.g. $2x^2$ and $5x^2$)
5.10	Collect Like Terms	Write all like terms as a single term by adding or subtracting them together
5.11	Simplify	Rewrite the expression in an easier to remember form.
5.12	nth Term	An algebraic expression giving the rule to find the value of any given term in the sequence
5.13	Term (sequence	Any value in the sequence
5.14	Consecutive	Values in order with no gaps (e.g. 5 and 6 are consecutive integers)
5.15	What is a linear sequence?	A sequence that increases or decreases by the same amount between terms

Year 8 – Maths – Autumn 1

Unit 1 - primes		
No.	**Question**	**Answer**
1.1	Prime number	An integer that has exactly two factors; one and itself
1.2	Square number	The result of multiplying an integer by itself
1.3	Square root	The inverse of squaring e.g. the square root of 64 is 8
1.4	Integer	A whole number
1.5	Multiple	A number in the times table
1.6	Factor	A number that divides into another number without any remainder
1.7	HCF (Highest Common Factor)	The largest integer that is a factor of all of the values.
1.8	LCM (Lowest Common Multiple)	The smallest integer that is a multiple of all of the values
1.9	Index	The amount of copies of the base value that need to be multiplied together.
1.10	Power	The index
1.11	Squared	A number to the power of 2
1.12	Cubed	A number to the power of 3
1.13	Prime Factors	The factors of a number that are also prime numbers
1.14	Prime Factor Decomposition	Breaking down a number into the product of its prime factors using a prime factor tree
1.15	Product	The result of a multiplication

Unit 2 - fractions		
No.	**Question**	**Answer**
2.1	Improper Fraction	A fraction where the numerator is greater than the denominator
2.2	Mixed Number	An improper fraction written as an integer part and a proper fraction.
2.3	Unit Fraction	A fraction with a numerator of one
2.4	How do you multiply fractions?	Multiply the numerators and multiply the denominators
2.5	How do you divide fractions?	Keep Change Flip
2.6	How do you add fractions?	Convert to a common denominator, then add the numerators
2.7	How do you subtract fractions?	Convert to a common denominator, then subtract the numerators
2.8	How do you find a fraction of an amount?	Divide the amount by the denominator and multiply by the numerator
2.9	To find…$\frac{1}{2}$ of	Divide by 2
2.10	To find…$\frac{1}{3}$ of	Divide by 3
2.11	To find…$\frac{1}{4}$ of	Divide by 4
2.12	To find…$\frac{1}{5}$ of	Divide by 5
2.13	To find… $\frac{1}{6}$ of	Divide by 6
2.14	To find…$\frac{1}{7}$ of	Divide by 7
2.15	To find… $\frac{1}{8}$ of	Divide by 8
2.16	To find… $\frac{1}{9}$ of	Divide by 9
2.17	To find…$\frac{1}{10}$ of	Divide by 10