# Year 7 – Maths – Autumn 2

| Date (week commencing) | Numbers to learn |
|---|---|
| 01/11/2021 | 5.1 – 5.12 |
| 08/11/2021 | 5.11 – 6.10 |
| 15/11/2021 | 6.1 – 6.17 |
| 22/11/2021 | 5.1 – 6.17 |
| 29/11/2021 | 1.1 – 1.20 & 5.1 – 5.12 |
| 06/12/2021 | 2.1 – 4.5 & 6.1 – 6.17 |
| 13/12/2021 | 1.1 – 6.17 |

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

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

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 5 – positive and negative numbers**

| No. | Question | Answer | Example |
|---|---|---|---|
| 5.1 | Integer | A whole number | 7, 10, (-5), 123 |
| 5.2 | Positive Number | Any number greater than zero | 2, 10, 150 |
| 5.3 | Negative Number | Any number smaller than zero | (-4), (-5), -123 |
| 5.4 | Absolute Value | The distance a number is from zero. | The absolute value of -3 is 3. The absolute value of 2 is 2. |
| 5.5 | What does + (+4) mean? | Increase by positive four (go up 4) | |
| 5.6 | What does + (-7) mean? | Increase by negative seven (do down seven) | |
| 5.7 | What does –(+2) mean? | Subtract positive two (go down 2) | |
| 5.8 | What does -(-5) mean? | Subtract negative 5 (go up 5) | |
| 5.9 | What does sum mean? | Add | The sum of 4 and 5 is 9 |
| 5.10 | What does subtract mean? | Take away | 10 subtract 4 is 6 |
| 5.11 | What is a scale factor? | How much the number has been scaled by | 3 x (-10) = -30. This is stretching (-10) by a scale factor of 3. |
| 5.12 | What is a negative scale factor? | How much the number has been scaled by in the opposite direction | (-3) x (8) = (-24). This is stretching (8) by a scale factor of (-3). |

**Unit 6 – expressions, equations and inequalities**

| No. | Question | Answer |
|---|---|---|
| 6.1 | What does 7y mean? | 7 x y |
| 6.2 | What does ab mean? | a x b |
| 6.3 | What does 3uv mean? | 3 x u x v |
| 6.4 | What does $\frac{x}{4}$ mean? | $x \div 4$ |
| 6.5 | Variable | A symbol (usually a letter) used to represent an unknown value<br>e.g. x |
| 6.6 | Term (algebra) | Each part of an expression separated by a + or –<br>( e.g. in $x^2 - 2x + 4,\ x^2, 4\ and\ -2x\ are\ the\ terms$) |
| 6.7 | Expression | A value written using at least one variable<br>(e.g. 3b or 5t – 9s) |
| 6.8 | Substitute | Replace the variable with something else |
| 6.9 | Like Terms | Terms that have the same letter and same index<br>( e.g. $2x^2$ and $5x^2$) |
| 6.10 | Collect Like Terms | Write all like terms as a single term by adding or subtracting them together |
| 6.11 | Expand | Multiply the coefficient outside the brackets with each term inside the brackets<br><br>Eg) 3(2y + 7) >>> 6y + 21 |
| 6.12 | Factorise | Find the common factor of all the terms and divide so that it is outside the bracket<br><br>Eg) 6y + 21 >>> 3(2y + 7) |
| 6.13 | Equation | An expression shown to be equal to another value<br>(e.g. 3b = 50 or 5t – 9s = 10t – 9s – 7 ) |
| 6.14 | Coefficient | The number in front of the variable<br>(e.g. for 2x, 2 is the coefficient of x) |
| 6.15 | Inequality | A comparison of two expressions other than "=" |
| 6.16 | Perimeter | The total distance around the outer edge of a shape |
| 6.17 | What does strategic mean? | To have made a logical plan |

# Year 7 – Maths – Autumn 1

| Unit 1 – numbers and numerals | | |
|---|---|---|
| **No.** | **Question** | **Answer** |
| 1.1 | What is analogue display? | A circular clock face with “hands” |
| 1.2 | What is digital display? | A clock displaying time in digits |
| 1.3 | How many digits do 24 hour clocks always have? | 4 (2 for hours and 2 for minutes) |
| 1.4 | What does am mean? | Before noon |
| 1.5 | What does pm mean? | Afternoon |
| 1.6 | With which clock do you use am and pm? | 12 hour clock |
| 1.7 | How many seconds in a minute? | 60 |
| 1.8 | How many minutes in an hour? | 60 |
| 1.9 | How many hours in a day? | 24 |
| 1.10 | What does “ > ” mean? | Greater than e.g. 3 > 2 |
| 1.11 | What does “ < “ mean? | Smaller than e.g. 2 < 3 |
| 1.12 | What does “ = “ mean? | The same as |
| 1.13 | What is place value? | The value of where the digit is in the number |
| 1.14 | How do you write one? | 1 |
| 1.15 | How do you write ten? | 10 |
| 1.16 | How do you write a hundred? | 100 |
| 1.17 | How do you write a thousand? | 1000 |
| 1.18 | How do you write ten thousand? | 10,000 |
| 1.19 | How do you write a hundred thousand? | 100,000 |
| 1.20 | How do you write a million? | 1,000,000 |

| Unit 2 – axioms and arrays | | |
|---|---|---|
| **No.** | **Question** | **Answer** |
| 2.1 | What is multiplication? | Counting the total of a number of equally sized groups |
| 2.2 | What is division? | Splitting into equal parts |
| 2.3 | What is commutativity? | The operation can be applied to two numbers in any order |
| 2.4 | Which two operations are commutative? | Multiplication and addition |
| 2.5 | What is associativity? | Grouping numbers to make the calculation easier |
| 2.6 | What is distributivity? | Multiplying a number by a group of numbers added together |
| 2.7 | What is a conjecture? | An educated guess |

| Unit 3 – factors and multiples | | |
|---|---|---|
| **No.** | **Question** | **Answer** |
| 3.1 | What is a factor? | A factor of a number divides that number exactly leaving no remainder |
| 3.2 | What is a prime number? | A prime number has exactly 2 factors, itself and 1 |
| 3.3 | What is a square number | A square number is the result of multiplying an integer by itself |
| 3.4 | What is a multiple? | Multiples of a number are found in the number’s times-table |
| 3.5 | What is a counter example? | An example which contradicts the original statement |

| Unit 4 – order of operations | | |
|---|---|---|
| **No.** | **Question** | **Answer** |
| 4.1 | Which operation has equal priority with addition? | Subtraction |
| 4.2 | Which operation has equal priority with multiplication? | Division |
| 4.3 | What do brackets mean? | Do this part first! |
| 4.4 | How do you find the area of a rectangle? | Length X Width |
| 4.5 | What is a variable? | A letter which represents an unknown number |

***Learning means…***
I am using look >> cover >> write >> check at least twice for this week’s facts

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

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

***so that…***
I achieve the minimum score of 8/10 on the quiz.