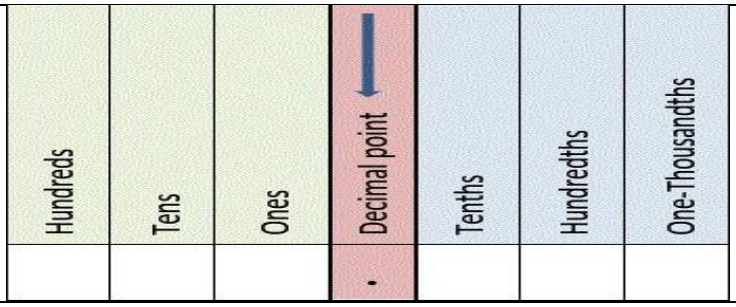
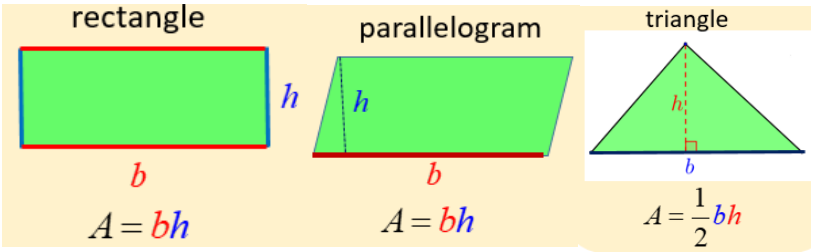
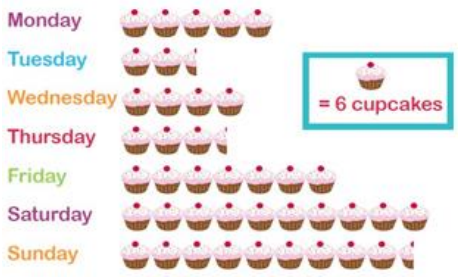
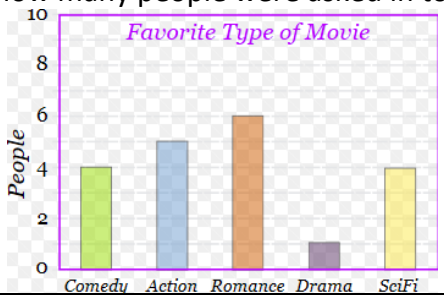
Y7 Autumn Maths Knowledge Organiser

Topic	Key fact	Hegarty maths clip number
Read, write and compare positive integers and decimals		13, 14 45 & 46
Multiply and divide by powers of 10	Multiplying: Move the digits to the left Dividing: Move the digits to the right	15 & 16
Calculations with integers	Addition and Subtraction: put in columns Multiplication: Remember place holder Division: Remember bus stop and remember to carry	1 to 12 & 18 to 23
Rounding	5 or more: round up 4 or less: keep the same Look to the right Significant figures: start counting at first non-zero	17, 56 & 130
Estimation	Round each value to 1 significant figure	131
Simplify expressions	Collect all the 'like' terms (numbers, x, x^2, x^3 are all separate terms) e.g. $12 + 3x + 6x^2 - 2x^3 - 5 - 3x + 5x^2 + 7x^3 = 7 + 11x^2 + 5x^3$ 3y means 3 x y $\frac{7}{x}$ means 7 ÷ x	156 and 157
Simplifying ratio	Divide all parts by the highest common factor. Always include the colon (:).	329
Perimeter	Perimeter is the distance all the way round a shape. All sides added together.	548-552
Area		553-559
Pictograms	Use the key to work out the number of cupcakes sold each day.  5 x 6 = 30 2.5 x 6 = 15 4 x 6 = 24 3.5 x 6 = 21 7 x 6 = 42 10 x 6 = 60 9.5 x 6 = 57	426

Bar charts	Which type of movie was most popular? ***Romance*** How many people said comedy was this favourite? ***4*** How many people were asked in total? 4 + 5 + 6 + 1 + 4 = ***20*** 	425

Key Vocabulary

- Integer – a whole number
- Product – the result of a multiplication.
- Divisor – the number that you are dividing by. Eg. 16 divided by 2. 2 is the divisor.
- Quotient - the answer after you divide one number by another.
- Power/Indices - The index of a number says how many times to use the number in a multiplication. It is written as a small number to the right and above the base number.
- Root – The inverse operation of a power.
- Significant figures - Leading zeros are not significant. For example, 0.00052 has two significant figures: 5 and 2. Trailing zeros in a number containing a decimal point are significant.
- Remainder - A remainder in mathematics is what's left over in a division problem.
- Round - Rounding means making a number simpler but keeping its value close to what it was.
- Truncate – A method of approximating a decimal number by dropping all decimal places past a certain point without rounding.
- Estimate - To estimate means to find something close to the correct answer.
- Approximate – an alternative word for estimate.
- Area: The space inside a 2D shape
- Perimeter: Distance all around a shape
- Term- each part of an expression. A single number or variable within an expression.
- Expression- a mathematical sentence containing numbers and variables.
- Simplify: Write in shorter form.