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| UNIT | Maths topic | Learning objectives/expected outcomes | Assessment for Learning activities |
| 1 | **Number and place value (1)** | * Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit * Use decimal notation for tenths, hundredths and thousandths * Partition, round and order decimals with up to three places, and position them on the number line * Use negative numbers in context, and calculate intervals across zero   I can read the value of each digit in a number or decimal  I can round large numbers to the nearest multiple of 10, 100 or 1000  I can round decimals to the nearest whole number and tenth  I can put a set of decimal numbers in order  I can put numbers that include negative numbers in order | *What do you look for first when you order a set of numbers? Which part of each number do you look at to help you?*  *I started with a number and rounded it to the nearest integer. The answer was 42. What number could I have started with?*  *Are there any other numbers that it could have been? What is the largest/smallest number that I could have started with? How do you know?*  *A number is partitioned like this: 4 000 000 + 200 000 + 60 000 + 300 + 50 + 8*  *Write the number. Now read it to me.*  *What is 14773.6 rounded to the nearest hundred?*  *What is 3.852 rounded to the nearest tenth? What if it was rounded to the nearest whole number?*  *Write these temperatures in order, starting with the lowest.*  *7.5˚ 6˚ -8˚ -3˚ -11˚ 2.5˚*  *Use these digits and arrange them like this: \_\_ . \_\_ \_\_ \_\_*  *5 8 9 2*  *What is the largest decimal number you can make?*  *What the smallest decimal number you can make?*  *Make a decimal number as near as possible to 9.*  *Make a decimal number between 2.5 and 2.9.*  *Write all the decimal numbers you have made in order, from smallest to largest.* |
| ... | **…** | … | *…* |
| 15 | **Patterns and number (2)** | * Identify common factors and common multiples of numbers * Recognise that prime numbers have only two factors and identify prime numbers less than 100 * Find the prime factors of two-digit numbers * Express missing number problems algebraically * Find pairs of numbers that satisfy number sentences involving two unknowns * Represent and interpret sequences, patterns and relationships and suggest and test hypotheses * Construct and use simple expressions and formulae in words then symbols   I can find the highest common multiples of different numbers  I can find the lowest common factors of different numbers  I can tell you all the prime numbers up to 100 and find the prime factors of other numbers  I can describe and explain sequences, patterns and relationships  I can suggest hypotheses and test them  I can write and use simple expressions in words and formulae  I can solve ‘finding all possibilities’ problems | *Describe the relationship between terms in this sequence:*  *3, 6, 12, 24, 48…*  *What is the rule or function for the relationship between x and y:*   |  |  |  |  |  | | --- | --- | --- | --- | --- | | *x* | *1* | *2* | *3* | *4* | | *y* | *1* | *3* | *5* | *7* |   *Investigate which numbers to 30 have only one prime factor.*  *Predict what numbers to 60 will have only one prime factor when you test them.*  *What are the common factors of 36, 42 and 48? What is the highest common factor?*  *What are the prime numbers between 90 and 100?*  *Explain why a square number always has an odd number of factors.*  *Write down a formula for the cost (C) of m pencils each costing 45 pence.*  *A triangle has 3 angles: a, a + 15, a + 30.*  *What are the three angles in the triangle?*  *36 cakes are arranged on two plates.*  *The first plate has 12 more cakes than the second plate.*  *How many cakes are on each plate?*  *What is the value of each letter?*  *3(e + 6)= 18*  *c/4 = 20*  *15+(3a-1) = 23*  *Which three prime numbers multiply to make 231?*  *\_\_ x \_\_ x \_\_ = 231*  *X and Y are two different whole numbers.*  *X + Y = 200*  *X is 45 greater than Y.*  *What are the numbers X and Y* |