Multiples, factors and primes

Terms	Illustrations	Definition
Common factor		If numbers share one or more **factors**, then they are called the common factors of those numbers. For example: 12 and 30 • The factors of 12 are: 1, 2, 3, 4, 6 and 12 • The factors of 30 are: 1, 2, 3, 5, 6, 10, 15 and 30 So the common factors of 12 and 30 are: 1, 2, 3 and 6
Common multiple		A number that is a multiple common to two or more numbers. For example: • Multiples of 2 are 2, 4, 6, 8, 10, 12, 14, 16, 18, … • Multiples of 3 are 3, 6, 9, 12, 15, 18, … So, common multiples of 2 and 3 are 6, 12, 18,
Factor		A number is a 'factor' if it divides exactly into a number e.g. the factors of 10 are 1, 2, 5, 10
Factorising		Finding all of the numbers which multiply together to give the number you start with.
Highest common factor (HCF)		The highest common factor of two or more numbers. For example: The HCF of 24 and 36 is 12 as it is the highest factor to divide in to both equally.
Lowest common multiple (LCM)		The lowest multiple which two or more numbers have in common. for example: The lowest common multiple of 6 and 12 is 12.

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Multiple		Counting in equal steps e.g. multiples of 2 = 2, 4, 6, 8…
		A multiple is also the result of multiplying a number by a whole or negative number *e.g.*
		*15 is a multiple of 5 as 5 x 3 = 15 but 16 is not a multiple of 5 as no **integer** can be multiplied by 5 to give 16.*
Prime Number		A prime number can be divided evenly only by 1, or itself.
		It must be a whole number greater than 1 e.g. 5 can only be divided evenly by 1 or 5, so it is a prime number but 6 can be divided evenly by 1, 2, 3 and 6 so it is not a prime number (it is a **composite number**).