Multiples, factors and primes

Terms	Definition	Illustrations
Common factor	If numbers share one or more factors, then they are called the common factors of those numbers.	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.	The multiples of 2 are 2, 4, 6, 8, 10, 12, 14, 16, … The multiples of 3 are 3, 6, 9, 12, 15, … So, the common multiples of 2 and 3 are 6, 12, …
Composite number	A positive integer that can be divided exactly by whole numbers other than itself and 1.	12 can be divided exactly by 1, 2, 3, 4, 6 and 12 so 12 is a composite number.
Factor	A number is a factor if it divides exactly into another number.	The factors of 50 are 1, 2, 5, 10, 25 and 50.
Factorising	Writing a number as a product of 2 or more factors.	50 is 1 x 50 or 2 x 5 x 5 or ….
Highest common factor (HCF)	The highest number that is a common factor of two or more numbers.	The factors of 24 are 1, 2, 3, 4, 6, 8, 12 and 24. The factors of 36 are 1, 2, 3, 4, 6, 9, 12, 18 and 36. So the highest common factor of 24 and 36 is 12.

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Least common multiple (LCM)	The lowest positive number which is a multiple of two or more numbers.	The multiples of 6 are 6, 12, 18, 24, 30, … The multiples of 8 are 8, 16, 24, 32, …. So the least common multiple of 6 and 8 is 24.
Multiple	The product of any quantity and an integer.	
Prime number	A positive integer that can only be divided exactly by itself and 1. 1 is not a prime number.	The first ten prime numbers are: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29