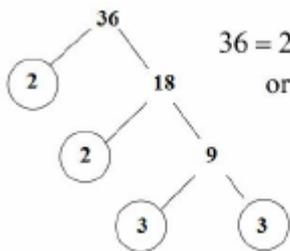


Yr 7 Sets 1, 2 and 3 Autumn Half Term
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Topic/Skill	Definition/Tips	Example
1. Multiple	The result of multiplying a number by an integer. The times tables of a number.	The first five multiples of 7 are: 7, 14, 21, 28, 35
2. Factor	A number that divides exactly into another number without a remainder. It is useful to write factors in pairs	The factors of 18 are: 1, 2, 3, 6, 9, 18 The factor pairs of 18 are: 1, 18 2, 9 3, 6
3. Lowest Common Multiple (LCM)	The smallest number that is in the times tables of each of the numbers given.	The LCM of 3, 4 and 5 is 60 because it is the smallest number in the 3, 4 and 5 times tables.
4. Highest Common Factor (HCF)	The biggest number that divides exactly into two or more numbers.	The HCF of 6 and 9 is 3 because it is the biggest number that divides into 6 and 9 exactly.
5. Prime Number	A number with exactly two factors . A number that can only be divided by itself and one. The number 1 is not prime , as it only has one factor, not two.	The first ten prime numbers are: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29
6. Prime Factor	A factor which is a prime number.	The prime factors of 18 are: 2, 3
7. Product of Prime Factors	Finding out which prime numbers multiply together to make the original number. Use a prime factor tree . Also known as 'prime factorisation'.	 $36 = 2 \times 2 \times 3 \times 3$ or $2^2 \times 3^2$
8. Square Number	The number you get when you multiply a number by itself .	1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, 144, 169, 196, 225... $9^2 = 9 \times 9 = 81$
9. Square Root	The number you multiply by itself to get another number. The reverse process of squaring a number.	$\sqrt{36} = 6$ because $6 \times 6 = 36$
10. Solutions to $x^2 = \dots$	Equations involving squares have two solutions , one positive and one negative .	Solve $x^2 = 25$ $x = 5$ or $x = -5$ This can also be written as $x = \pm 5$
11. Cube Number	The number you get when you multiply a number by itself and itself again .	1, 8, 27, 64, 125... $2^3 = 2 \times 2 \times 2 = 8$

12. Cube Root	The number you multiply by itself and itself again to get another number. The reverse process of cubing a number.	$\sqrt[3]{125} = 5$ because $5 \times 5 \times 5 = 125$
13. Powers of...	The powers of a number are that number raised to various powers .	The powers of 3 are: $3^1 = 3$ $3^2 = 9$ $3^3 = 27$ $3^4 = 81$ etc.
14. Percentage	Number of parts per 100.	31% means $\frac{31}{100}$
15. Finding 10%	To find 10%, divide by 10	10% of £36 = $36 \div 10 = £3.60$
16. Finding 1%	To find 1%, divide by 100	1% of £8 = $8 \div 100 = £0.08$
17. Percentage Change	$\frac{\text{Difference}}{\text{Original}} \times 100\%$	A games console is bought for £200 and sold for £250. % change = $\frac{50}{200} \times 100 = 25\%$
18. Fractions to Decimals	Divide the numerator by the denominator using the bus stop method.	$\frac{3}{8} = 3 \div 8 = 0.375$
19. Decimals to Fractions	Write as a fraction over 10, 100 or 1000 and simplify.	$0.36 = \frac{36}{100} = \frac{9}{25}$
20. Percentages to Decimals	Divide by 100	$8\% = 8 \div 100 = 0.08$
21. Decimals to Percentages	Multiply by 100	$0.4 = 0.4 \times 100\% = 40\%$
22. Fractions to Percentages	Percentage is just a fraction out of 100. Make the denominator 100 using equivalent fractions. When the denominator doesn't go in to 100, use a calculator and multiply the fraction by 100.	$\frac{3}{25} = \frac{12}{100} = 12\%$ $\frac{9}{17} \times 100 = 52.9\%$
23. Percentages to Fractions	Percentage is just a fraction out of 100. Write the percentage over 100 and simplify.	$14\% = \frac{14}{100} = \frac{7}{50}$
24. Multiplying with decimals	Multiply each number by a power of ten until it is an integer. Multiply the numbers together. Then divide by answer by the total power of ten.	
25. Dividing with decimals	Write the question as a fraction, multiply numerator and denominator by the same power or 10 until they are integers. Then divide the two numbers	

26. Rounding	Find the place value you need to round to, look one place to the right. 5 or more- round up 4 or less- keep the same	
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