KEY VOCAB

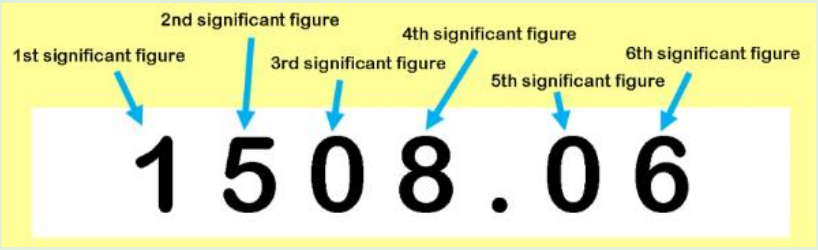
Integers are whole numbers that can be positive, negative or zero.

Multiples are just times tables. Multiples of 5 are 5, 10, 15, 20, 25 …

Factors is a number that divides into another number exactly and without leaving a remainder. Factors of 10 are 1, 2, 5 and 10.

Index notation is a way of representing repeated multiplications of the same number. For example $5^2 \times 6^3$ is index notation which also means 5 x 5 x 6 x 6 x 6.

Significant Figures



KEY KNOWLEDGE

Standard Form

Ordinary Number	Standard Form
29	2.9×10^1
350	3.50×10^2
4716	4.716×10^3
600000000	6×10^8
0.3	3×10^{-1}
0.09	9×10^{-2}
0.0071	7.1×10^{-3}
0.000502	5.02×10^{-4}

Standard Form is a system of writing numbers which can be particularly useful for working with very large or very small numbers. It is based on using powers of 10 to express how big or small a number is.

Laws of Indices

$a^2 \times a^5 = a^7$

$a^9 \div a^5 = a^4$

$(a^2)^5 = a^{10}$

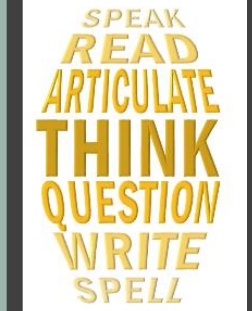
$a^0 = 1$

$a^{-3} = \frac{1}{a^3}$

$a^{\frac{3}{2}} = \sqrt[2]{a^3}$

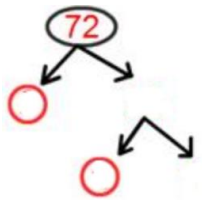
MATHS

Y9 Number



Write 72 as a product of its primes

Hint: Try to find two factors where one of them is prime!



Square Numbers

4 squared is 16
$4^2 = 16$

4 ⟷ 16

$\sqrt{16} = 4$
The square root of 16 is 4

Cube Numbers

2 cubed is 8
$2^3 = 8$

2 ⟷ 8

$\sqrt[3]{8} = 2$
The cube root of 8 is 2

Lowest Common Multiple (LCM) is the first number in the times tables of two or more numbers.

3's: 3, 6, 9, 12, 15, 18, **21**, 24

7's: 7, 14, **21** 28, 35

LCM of 3 and 7 = 21

Highest Common Factor (HCF) is the biggest factor that divides into two or more numbers.

30	12
1 x 30	1 x 12
2 x 15	2 x **6**
3 x 10	3 x 4
5 x **6**	

HCF of 30 and 12 = 6

FURTHER READING

https://www.bbc.co.uk/bitesize/topics/z7kw2hv
https://corbettmaths.com/contents/
https://www.pearsonactivelearn.com/app/library