| Multiplication and division vocabulary |  |  |
| :---: | :---: | :---: |
| Term | Definition | Example |
| factor | a number that divides exactly into another number | $\begin{aligned} & \text { factors of } 12= \\ & 1,2,3,4,6,12 \\ & \hline \end{aligned}$ |
| common factor | factors of two numbers that are the same | common factors of 8 and $12=1,2,4$ |
| prime number | a number with only 2 factors: 1 and itself | $2,3,5,7,11,13,17,19 \ldots$ |
| composite number | a number with more than two factors | 12 (it has 6 factors) |
| prime factor | a factor that is prime | prime factors of $12=$ $2,3$ |
| multiple | a number in another number's times table | multiples of $9=$ 9, 18, 27, 36... |
| common multiple | multiples of two numbers that are the same | common multiples of 4 and $6=12,24 \ldots$ |
| square numbers | the result when a number has been multiplied by itself | $\begin{aligned} & 25\left(5^{2}=5 \times 5\right) \\ & 49\left(7^{2}=7 \times 7\right) \end{aligned}$ |
| cube numbers | the result when a number has been multiplied by itself 3 times | $\begin{gathered} 8\left(2^{3}=2 \times 2 \times 2\right) \\ 27\left(3^{3}=3 \times 3 \times 3\right) \end{gathered}$ |


| Fractions, decimals \& percentages |  |  |  | Angles |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1/100 | 0.01 | 1\% | $\div 100$ | full turn | $360^{\circ}$ |
| 1/20 | 0.05 | 5\% | $\div 20$ | half turn | $180^{\circ}$ |
| $1 / 10$ | 0.1 | 10\% | $\div 10$ | right angle | $90^{\circ}$ |
| $1 / 5$ | 0.2 | 20\% | $\div 5$ | acute angle | < $90^{\circ}$ |
| $1 / 4$ | 0.25 | 25\% | $\div 4$ | obtuse angle | $>90^{\circ}$ |
| 1/2 | 0.5 | 50\% | $\div 2$ | reflex angle | $>180^{\circ}$ |
| 1/2 | 0.5 | 50\% | $\div 2$ | angles on a straight line | $180^{\circ}$ |
| 3/4 | 0.75 | 75\% | $\div 4, x 3$ | angles inside a triangle | $180^{\circ}$ |
| 1 | 1 | 100\% | $\div 1$ | angles inside a quadrilateral | $360^{\circ}$ |

## Shape vocabulary

perimeter $=$ measure around the edge (circumference $=$ perimeter of a circle)

| horizontal line | parallel lines |
| :---: | :---: |
| vertical line | perpendicular line (at right angles) |

## Roman numerals

| 1 | I | 100 | C |
| :---: | :---: | :---: | :---: |
| 5 | V | 500 | D |
| 10 | X | 1000 | M |
| 50 | L |  |  |

## YEAR 6 MATHS

KNOWLEDGE ORGANISER

## 2D shapes

| Name | No. of sides |
| :---: | :---: |
| quadrilateral | 4 |
| pentagon | 5 |
| hexagon | 6 |
| heptagon | 7 |
| octagon | 8 |
| nonagon | 9 |
| decagon | 10 |

polygon = shape with straight sides regular = all sides/angles the same irregular = sides/angles not same


Types of quadrilateral

parallelogram trapezium rhombus

## AREA

is the amount of space inside a 2D shape usually measured in $\mathrm{cm}^{2}$ or $\mathrm{m}^{2}$
Area of a triangle
$=$ (base $\times$ height) $\div 2$
Area of a parallelogram
$=$ base x height
(Height = perpendicular height)


Volume = the amount of space a 3D shape takes up, usually measured in $\mathrm{cm}^{3}$ or $\mathrm{m}^{3}$

Volume of a cuboid =
length x width x height

|  | x | height |
| :---: | :---: | :---: |
|  |  | The mode |
| The mean | The median | appears the most. |
| A type of average. To find the mean, add up all the numbers and divide by how many there are. E.g. the mean of 4,5 , | middle number in an ordered list not always a | order the numbers lowest to highest and see which |
| $16 \div 4=4 \text { ) }$ |  | most often. |

