

\*\*\*\*NUMBER\*\*\*\*

To find a **half** of a number, divide by 2  
To find a **quarter** of a number, divide by 4  
To **double** a number, multiply by 2  
To **treble** a number, multiply by 3

< (this means less than) **REMEMBER** the point always goes to the **SMALLER** number  
> (this means more than)

A **factor** of a number is any number that divides into it exactly, so **factors** of 20 are 1, 2, 4, 5, 10, 20; **factors** of 30 are 1, 2, 3, 5, 6, 10, 15, 30 \***HCF**\*=**Highest Common Factor**

A **multiple** of a number is any number you get when you multiply the first number, so **multiples** of 5 are 5, 10, 15, 20, 25, 30 etc etc \***LCM**\*=**Lowest Common Multiple**

When you **multiply a decimal number by 10**, simply move ALL the digits 1 place to the left, but **KEEP** the decimal point in the same place, so  $2.3 \times 10 = 23$  (or 23.0)

When you **multiply a decimal number by 100**, simply move ALL the digits 2 places to the left, but **KEEP** the decimal point in the same place, so  $2.3 \times 100 = 230$  (or 230.0) (Note you may need to put in a nought)

When you **divide a decimal number by 10**, simply move ALL the digits 1 place to the right, but **KEEP** the decimal point in the same place, so  $2.3 \div 10 = 0.23$  (Note you may need to put a nought on the front)

When you **divide a decimal number by 100**, simply move ALL the digits 2 places to the right, but **KEEP** the decimal point in the same place, so  $2.3 \div 100 = 0.023$  (Note you may need to put a nought or noughts on the front)

**Mean (or Average)** of some numbers, is the total divided by how many there are, so the **Mean (or average)** of 4, 5, 6, and 1 =  $TOTAL \div 4 = 16 \div 4 = 4$

The **median** number is the number in the **middle** of an **ordered** set of numbers, so to find the **median** of 1, 3, 2, 5, 4, - first rearrange in order - 1, 2, 3, 4, 5 - **median** is in the middle = 3

The **median** number is the number in the **middle** of an **ordered** set of numbers, so to find the **median** of 1, 3, 2, 5, 4, 6, - first rearrange in order - 1, 2, 3, 4, 5, 6 - **median** is in the middle, between 3 and 4 = 3.5 (3 and a half)

The **mode** number is the number that comes up the **most** in a set of numbers, so for the numbers 1, 3, 2, 3, 2, 3, 5, 4, the **mode** = 3 .... (it is possible to have more than one **mode**)

**Rounding**

When rounding to the **nearest 10**, 5 always goes up so 25 rounds to 30; 135 rounds to 140;

When rounding to the **nearest 100**, 50 always goes up so 250 rounds to 300; and so on

When rounding to the **nearest whole number**, 3.527 rounds to 4; 2.399 rounds to 2

When rounding to **one place of decimals**, 3.527 rounds to 3.5; 2.399 rounds to 2.4

When rounding to **two places of decimals**, 3.527 rounds to 3.53; 2.399 rounds to 2.40

**PER-CENT** - means 'out of a hundred' so 10% means 10 out of a hundred

$\frac{1}{4} = 0.25 = 25\%$   $\frac{1}{2} = 0.5 = 50\%$   $\frac{3}{4} = 0.75 = 75\%$  Whole thing = 100%

When finding %, some can be done mentally.

To find 40% - simply find 10% (by dividing by 10) then multiply by 4.

\*\*\*\*SHAPE SPACE\*\*\*\*

**Angles (AROS R Angles)**

angle between 0 and 90° is **acute**

angle of 90° is a **right angle**

angle between 90° and 180° is **obtuse**

angle of 180° is a **straight line angle**

angle between 180° and 360° is **reflex**

lines which are exactly the same distance apart are **parallel** (like railway lines)

lines which are at exactly 90° are **perpendicular** (like this - T )

**Triangle** (3 sides - angles add up to 180°) **Scalene** = all sides/angles different

**Isosceles** = 2 sides/angles the same **Equilateral** = all sides/angles the same

squares and rectangles are **quadrilaterals**

**ALL quadrilaterals** have 4 sides - angles add up to 360°

**pentagon** (5 sides) **hexagon** (6 sides) **heptagon** ( 7 sides) **octagon** ( 8 sides)

**Prisms** - have the same shape on each end **Pyramids** come to a point

**Circle**

**radius** = half the diameter (r =  $\frac{1}{2}$  d) **Diameter** = twice the radius (d = 2 r)

**Circumference** is the distance all around the circle (the outside of the circle)

**Area** of a circle =  $\pi r^2$  **Circumference** =  $2\pi r$  or  $\pi d$  (where  $\pi = 3.142$ )

\*\*\*\*MEASURE\*\*\*\*

10 mm = 1 cm

**Kilo means a thousand**

100 cm = 1 m

1000m = 1 km

1 **Kilogram** (kg) is about 2 **pounds** ..... so 1 **pound** is about  $\frac{1}{2}$  **kilogram** (kg)

1 **Pint** is just over  $\frac{1}{2}$  **litre** ..... so 1 **litre** is just under 2 **pints**

1 **Gallon** is about 4 **litres**

1 **Gallon** is 8 **pints**

**Area** is in **cm<sup>2</sup>** (Area of a rectangle/square = Length x Breadth)

**Volume** is in **cm<sup>3</sup>** (Volume of a cuboid = Length x Breadth x Height)

**Capacity** is 'Liquid Volume'- **1cm<sup>3</sup> VOLUME of water = 1ml CAPACITY= 1g MASS**

**Perimeter** means the length all around a shape

\*\*\*\*TIME\*\*\*\*

**am** = between 12 midnight and 12 noon

**pm** = between 12 noon and 12 midnight

to change an **am** time to the 24 Hour clock, just put 0 on the front and remove am, so 2:15 am becomes 02:15 (unless it already has 2 digits before the : eg 10:15am becomes 10:15

to change a **pm** time to the 24 Hour clock, just add 12 hours and remove pm, so 6:15 pm becomes 18:15

to change a 24 hour time to **am**, just take the 0 off the front (if its got one) and put **am** on the end, so 04:20 becomes 4:20 am

to change a 24 hour time to **pm**, just take away 12 hours, and put **pm** on the end so 16:00 becomes 4:00 pm

\*\*\*PROBABILITY\*\*\*

Probability of something happening = number of events ÷ by number of outcomes

SO tossing a 'head' with a coin =  $\frac{1}{2}$  ; throwing a 'Six' with a dice =  $\frac{1}{6}$