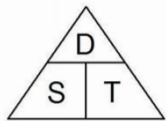


Year 10 Foundation Unit 2 KO – Real Life Graphs, Linear Graphs, Transformations 1 and 2

Real Life Graphs		
1	Axis	The 'x' and 'y' lines that cross at right angles.
2	Co-ordinate	A pair of numbers that show an exact position. (x, y)
3	x co – ordinate	Describes the movement left or right from $(0,0)$. - moves left, + moves right
4	y co – ordinate	Describes the movement up or down from $(0,0)$. - moves down, + moves up
5	Quadrant	The 4 areas made when we divide up a plane by an x and y axis.
6	Midpoint	The middle of a line or line segment.
7	Line Segment	Part of a line that connects two points.
8	Distant-time graphs	Travel graph representing distance on y axis against time on x axis.
9	Speed	The rate at which something moves. $Speed = \frac{Distance}{Time}$ 
10	Velocity	The speed something is moving with its direction.
11	Velocity-time graph	Travel graph representing speed on y axis against time on x axis.
12	Rate of change	The speed at which a variable changes over a specific period of time.
13	Gradient	The steepness of a line. $\frac{Change\ in\ y}{Change\ in\ x}$ $= \frac{y_2 - y_1}{x_2 - x_1}$

Linear Graphs		
1	Plot	To draw a graph.
2	Sketch	A drawing to show the general shape of a graph.
3	Straight line graphs	$y = mx + c$ m = gradient c = y intercept
4	Y intercept (c)	Where the line crosses the y axis.
5	$y = a$	A horizontal line that cuts through the y axis at point a .

Common straight line graphs	$x = a$	A vertical line that cuts through the x axis at point a .
	$y = x$	A diagonal line that crosses through the origin where the values of x and y are the same.
	$y = -x$	A diagonal line that crosses through the origin where the x co-ordinate is multiplied by -1 to get the y co-ordinate.
6	Parallel lines	Lines with the same gradient.
7	Linear Function	Where the graph of the equation forms a straight line.
8	Rearrange	To change the subject of a formula.
9	Subject of a formula	The letter on its own one side of the equal's sign.

Transformations			
1	Congruent	Two shapes that are exactly the same size with the same angles.	
2	Similar	When one shape is an enlargement of another. The angles are the same size.	
3	Object	The shape that will be transformed.	
4	Image	The result produced after a shape has been transformed.	
5	Clockwise	A movement going in the same direction as clock hands.	
6	Anti-clockwise	A movement going in the opposite direction as clock hands.	
7	Full turn	360°	
8	Half turn	180°	
9	Quarter turn	90°	
10	Three-quarter turn	270°	
11	Transformation	An action that is carried out on a shape, like a reflection, rotation, translation, or enlargement.	
12	Type of transformation	Definition	In order to describe the transformation you need:
	a) Reflection	When a shape is reflected in a mirror line or line of symmetry.	Line of reflection

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	b)	Rotation	A turn around a point.	Centre of rotation Angle Direction
	c)	Translation	A movement left, right, up, or down, on a coordinate grid.	Translation vector
	d)	Enlargement	The process of making a shape bigger or smaller.	Center of enlargement Scale factor
13	Column Vector		Is used to describe a translation $\begin{array}{ccc} - \textit{Left} & \begin{pmatrix} x \\ y \end{pmatrix} & + \textit{Right} \\ - \textit{Down} & & + \textit{Up} \end{array}$	
14	Scale Factor		The multiplying factor applied to an original object, in order to achieve an enlarged image.	