Graphs

Many algebraic expressions can be interperated as graphs. Each expression would have a different graph. The shape of the graph can be found from the equation. Linear Equations The graph made from a linear equation would give a stright line graph. Linear equations are written in the form y = mx + c. From that you can see that the m represents the gradient of the graph and that c shows the point where the graph crosses the y-axis. Here are some examples: y = x y = 2 x = - 6 y = 2 - 2 x Quadratic Equations These graphs are n or u shaped curves, or parabolas. They all have an axis of symmetry. The equation for these graphs are in the form y = ax2 + bx + c. This means the highest power would be x2. Below are some examples: y = x2 y = - x2 y = x2 - 8 y = (x + 6)2 Cubic Equations Cubic graphs should have upto two turning points. They come in many forms. They do not have to be symmetrical. The equation for these graphs are in the form y = ax3 + cx2 + dx + e. This means the highest power would be x3. Below are some examples: y = x3 y = - x3 y = x3 - 8 x Reciprocal Equations These graphs are all hyperbolas. This means they consist of two separate lines which are opposite each other as though they were a reflection of each other. The equations for this type of graph come in the form y = a / x. Below are some examples: y = 1 / x y = 10 / x - 2

About the Author

Revision notes by Richard Tang