

Draw a graph of the function $y=2x^2 + 3x - 12$ for values of $-5 \leq x \leq 5$

Always start these tables with the x value.

Build up to the first term a little bit at a time. (So here, start off with x^2 and then progress to $2x^2$).

Calculate the second term...

... and then add the first and second term together.

Complete the function

Copy it up neatly

| x | x^2 | $2x^2$ | $3x$ | $2x^2 + 3x$ | $2x^2 + 3x - 12$ | y |
|----|----------------|---------------------------|-----------------|---|--|---|
| -5 | -5×-5 | $(-5 \times -5) \times 2$ | $3 \times (-5)$ | $((-5 \times -5) \times 2) + (3 \times (-5))$ | $((-5 \times -5) \times 2) + (3 \times (-5)) - 12$ | |
| -4 | | | | | | |
| -3 | | | | | | |
| -2 | | | | | | |
| -1 | | | | | | |
| 0 | | | | | | |
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |

Drawing your graph

1. Draw the axes for a graph.
2. Look at the lowest and highest values of x and y to ensure that you fit the graph onto the paper.
3. Mark each scale onto the graph.
4. Plot the x co-ordinate against each y co-ordinate.
5. Join the points and label your graph.