Plotting Linear Graphs — Skill 1

$y = 2x$

x	-3	-2	-1	0	1	2	3
y							

$y = 2x + 2$

x	-3	-2	-1	0	1	2	3
y							

$y = 2x - 3$

x	-3	-2	-1	0	1	2	3
y							

Plotting Quadratic Graphs — Skill 2

$y = x^2$

x	-4	-3	-2	-1	0	1	2	3	4
y									

$y = x^2 + 2$

x	-4	-3	-2	-1	0	1	2	3	4
y									

$y = x^2 + 2x$

x	-4	-3	-2	-1	0	1	2	3	4
y									

Literacy

Write a short paragraph detailing your examination method on how to both plot straight line and Quadratic Graphs.

Memory

Step 1: Create a table.
This means you can gain a set of coordinates to plot. Choose realistic and easy x values.

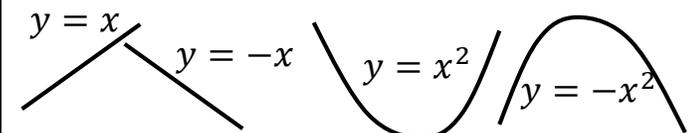| x	-3	-2	-1	0	1	2	3
y							

Step 2: Substitute in the x values to find y values.
Remember $x^2 = x \times x$

Step 3: Plot coordinates.
These are in the columns in your table.

Step 4: Connect the points together.

$y = x$ $y = -x$ $y = x^2$ $y = -x^2$

Rough sketches to help, these diagrams aren't accurate.

Linear Graphs — Stretch 1

1) a) Plot the line $y = 3x - 4$

   b) i) Plot a line parallel to the line $y = 3x - 4$.
   ii) What is the equation of the line?
   iii) What do you notice?

2) a) Plot the line $y = x + 2$

   b) i) Plot a line perpendicular to $y = x + 2$.
   ii) What is the equation of the line?
   iii) What do you notice?

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Quadratic Graphs — Stretch 2

1) Plot the graph $y = -x^2$

2) a) Plot the graph $y = 2x^2 - 3x$
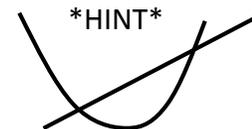
   b) What are the solutions when $2x^2 - 3x = 2$

Linear and Quadratic Graphs — Stretch 3

What are the solutions

$y = x^2 + 2x - 4$

$y = 2x - 1$

HINT