Maths

Draw Quadratic Graphs $a > 1$

Miss Davies

This resource contains colour font and images

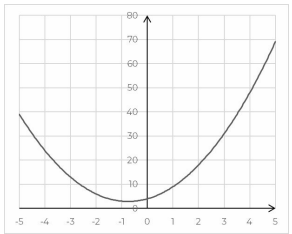
Plot quadratic equations

1. Complete the table of values for $y = 2x^2 + 3x + 4$.

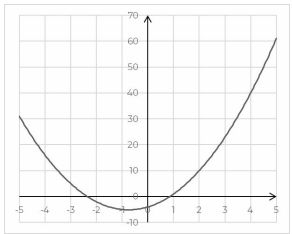
x	-3	-2	-1	0	1	2	3
y	13				9		

2. Which graph shows $y = 2x^2 + 3x + 4$?

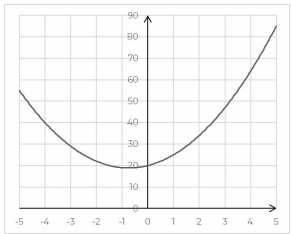
A



B



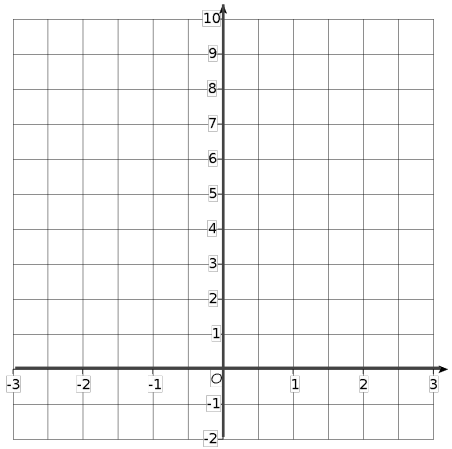
C



3. a) Complete the table of values for $y = 2x^2 - 3x$

x	-1.5	-1	-0.5	0	0.5	1	1.5
y							

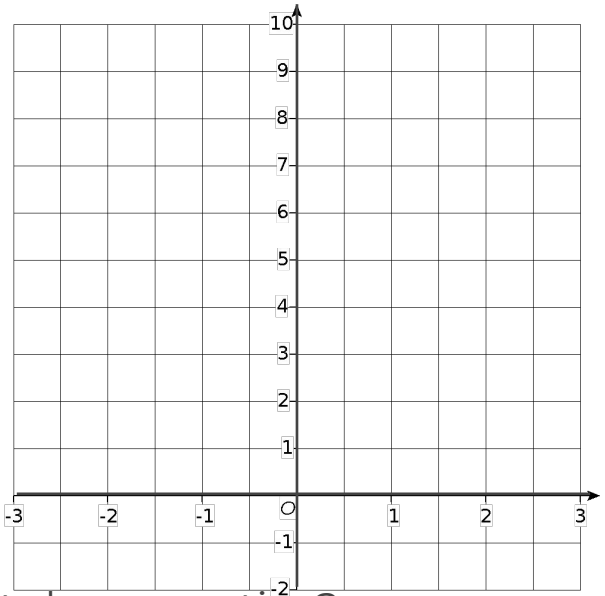
b) Plot the curve $y = 2x^2 - 3x$



Plot quadratic equations

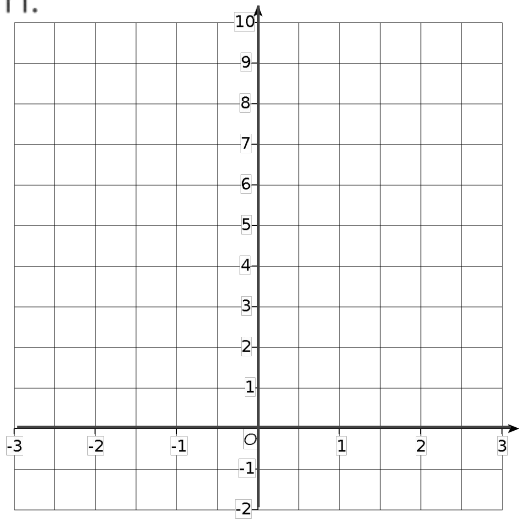
4. On the grid below plot the curves.

$y = 2x^2 - 1$ $y = 3x^2 - 1$ $y = 4x^2 - 1$



What do you notice?

5. Sam says that $y = x^2 - x$ is a reflection of $y = x^2 + x$ in the line $x = 0$. Plot both graphs to justify Sam's claim.



Answers

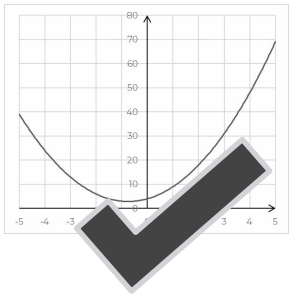
Plot quadratic equations

1. Complete the table of values for $y = 2x^2 + 3x + 4$.

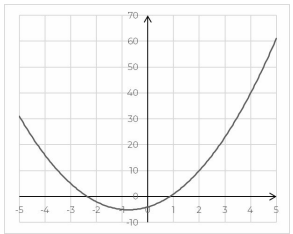
x	-3	-2	-1	0	1	2	3
y	13	6	3	4	9	18	31

2. Which graph shows $y = 2x^2 + 3x + 4$?

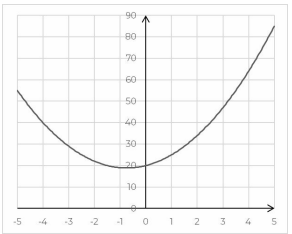
A



B



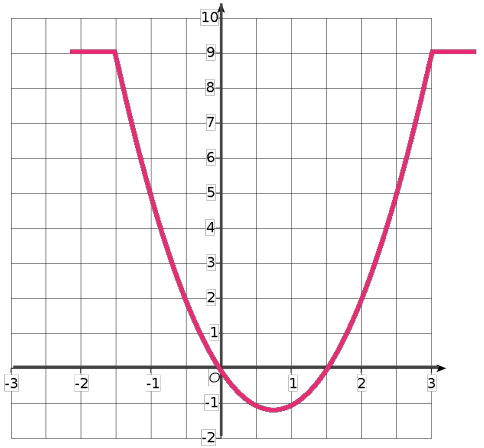
C



3. a) Complete the table of values for $y = 2x^2 - 3x$

x	-3	-2	-1	0	0.5	1	1.5
y	9	5	2	0	-1	-1	0

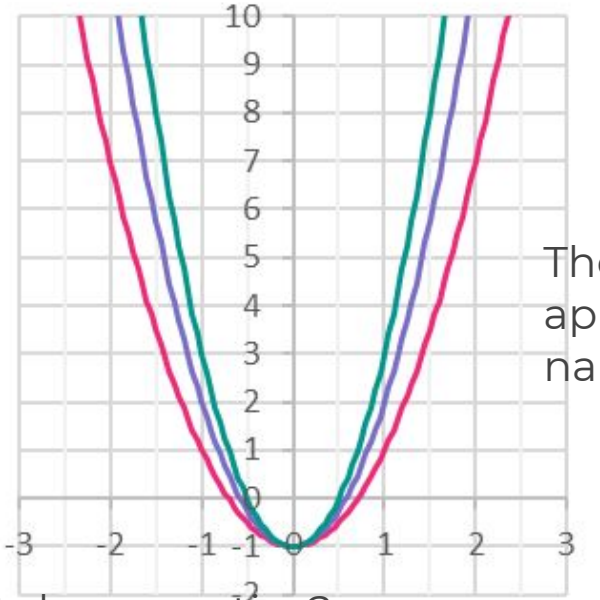
b) Plot the curve $y = 2x^2 - 3x$



Plot quadratic equations

4. On the grid below plot the curves.

$y = 2x^2 - 1$ $y = 3x^2 - 1$ $y = 4x^2 - 1$



The graphs appear narrower

What do you notice?

5. Sam says that $y = x^2 - x$ is a reflection of $y = x^2 + x$ in the line $x = 0$. Plot both graphs to justify Sam's claim.