

Plot simple quadratic equations

Maths

Mr Clasper



Plot simple quadratic equations

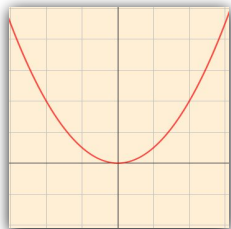
1. Denny has tried to complete a table of values for $y = x^2$.

x	-3	-2	-1	0	1	2	3
y	-9	-4	-1	0	1	4	9

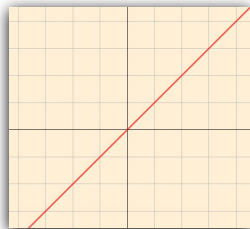
What mistake has he made?

2. Which graph shows $y = x^2$?

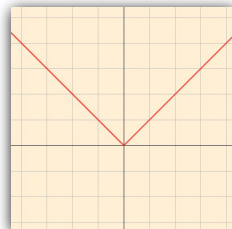
A



B



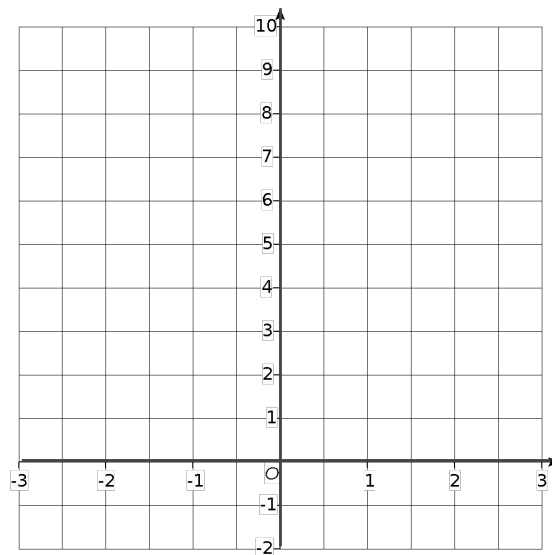
C



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

x	-3	-2	-1	0	1	2	3
y		4		0	1		9

b) Plot the curve $y = x^2$.



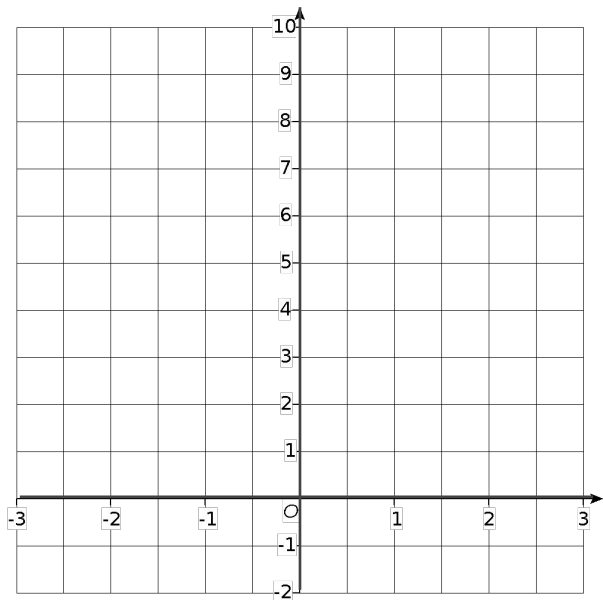
Plot simple quadratic equations

4. On the grid below plot the curves.

$$y = x^2 + 1$$

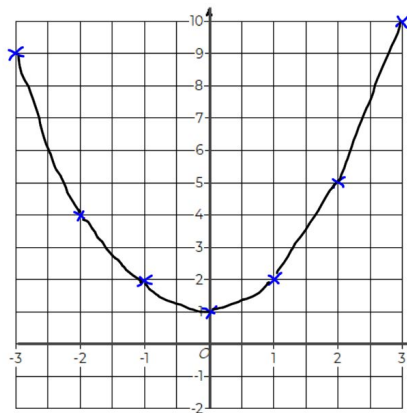
$$y = x^2 + 2$$

$$y = x^2 - 1$$

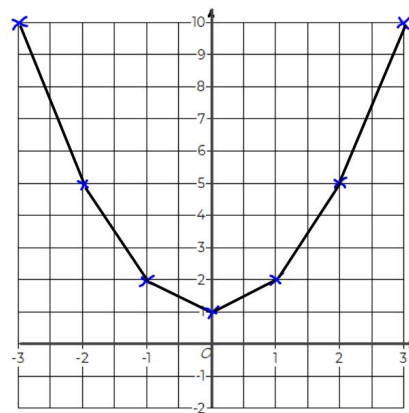


What do you notice?

5. Amir and Ella each plot $y = x^2 + 1$



Amir



Ella

can you spot their mistakes?



Answers



Plot simple quadratic equations

1. Denny has tried to complete a table of values for $y = x^2$

x	-3	-2	-1	0	1	2	3
y	-9	-4	-1	0	1	4	9

What mistake has he made?

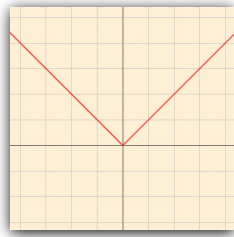
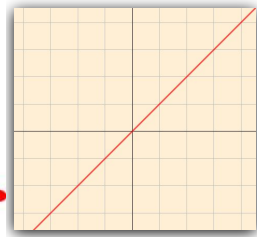
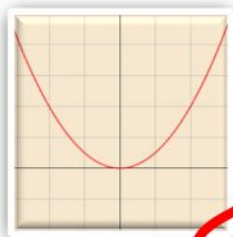
All the y values should be positive

2. Tick the graph that shows $y = x^2$

A

B

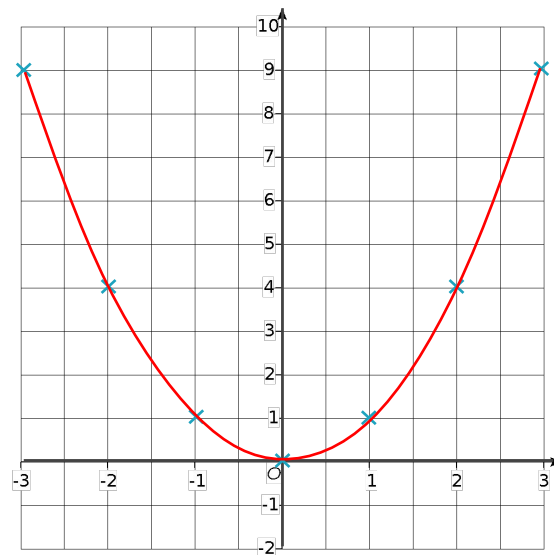
C



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

x	-3	-2	-1	0	1	2	3
y	9	4	1	0	1	4	9

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



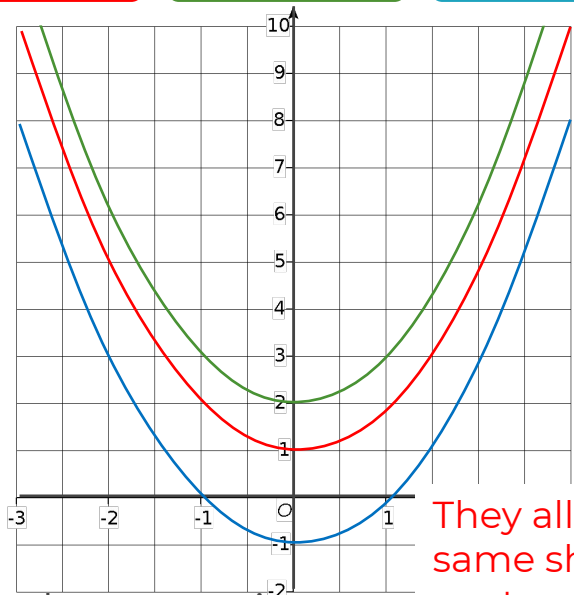
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4. On the grid below plot the curves

$$y = x^2 + 1$$

$$y = x^2 + 2$$

$$y = x^2 - 1$$

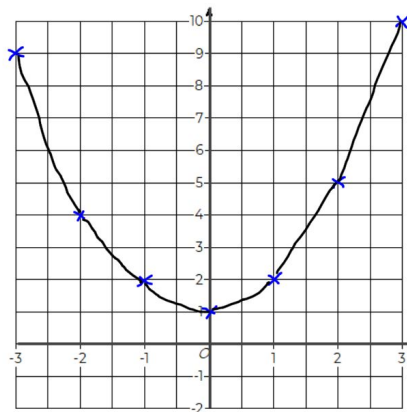


What do you notice?

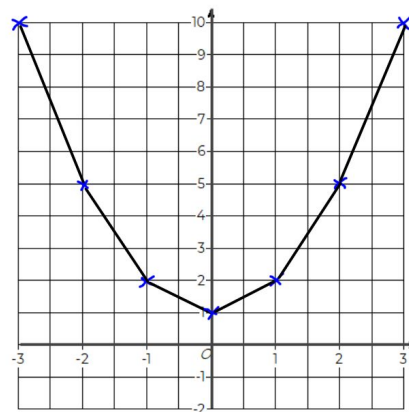
They all have the same shape and are translations of the graph $y = x^2$

4. Amir and Ella plot $y = x^2 + 1$

Amir – Incorrectly plotted points at (-2,4) and (-3,9)



Amir



Ella

Ella – Has connected her points with straight lines

