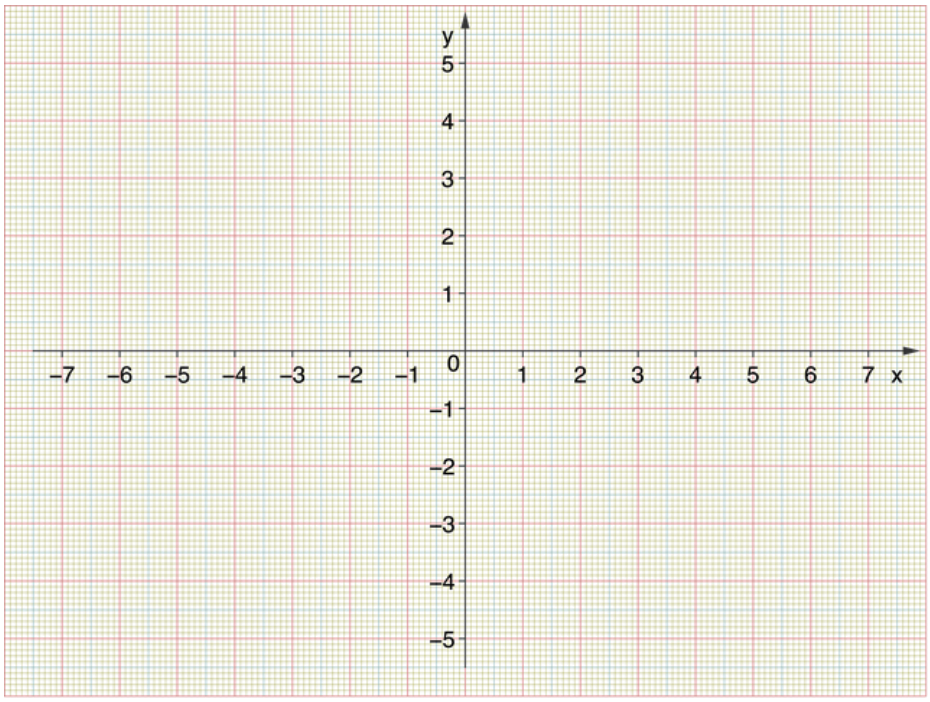
1. Calculate the (x, y) pairs and connect them to plot the parabola.

$$y = x^2$$

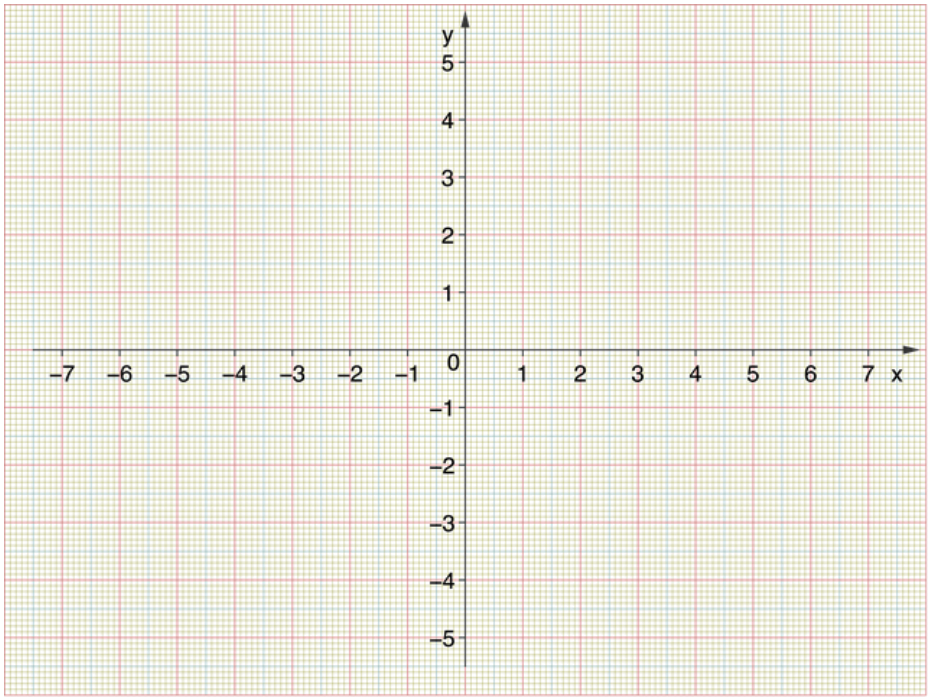
x	y
-2	
-1	
0	
1	
2	



2. Calculate *f(x)* and connect them to plot the parabola.

$$f(x) = x^2$$

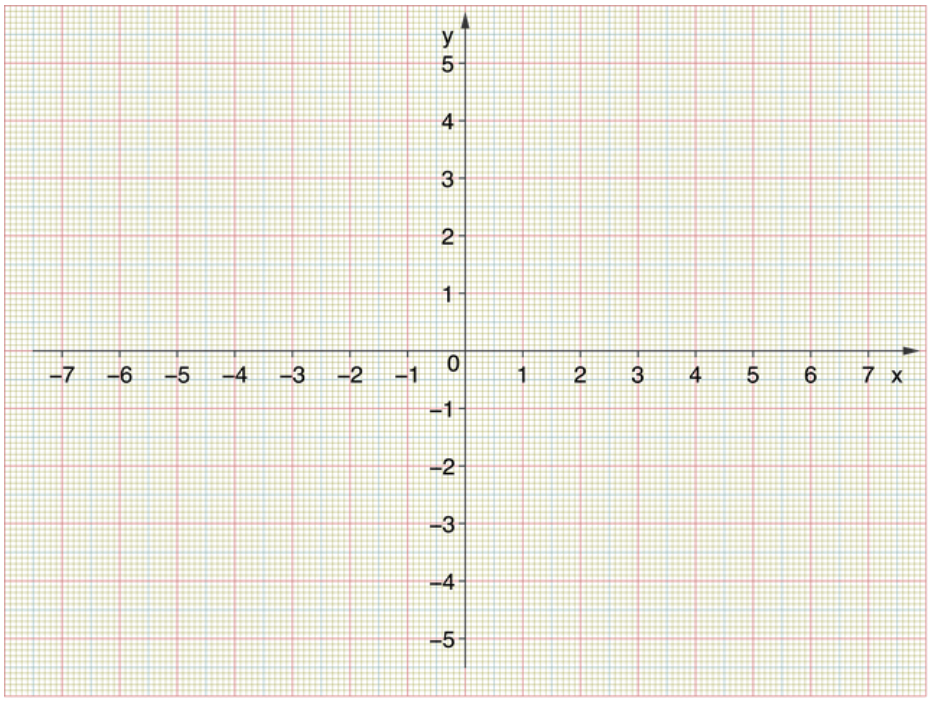
x	*f(x)*
-2	
-1	
0	
1	
2	



3. Calculate *f(x)* and connect them to plot the parabola.

$$f(x) = \frac{1}{2} x^2$$

x	*f(x)*
-2	
-1	
0	
1	
2	



4. Calculate *f(x)* and connect them to freehand the parabola.

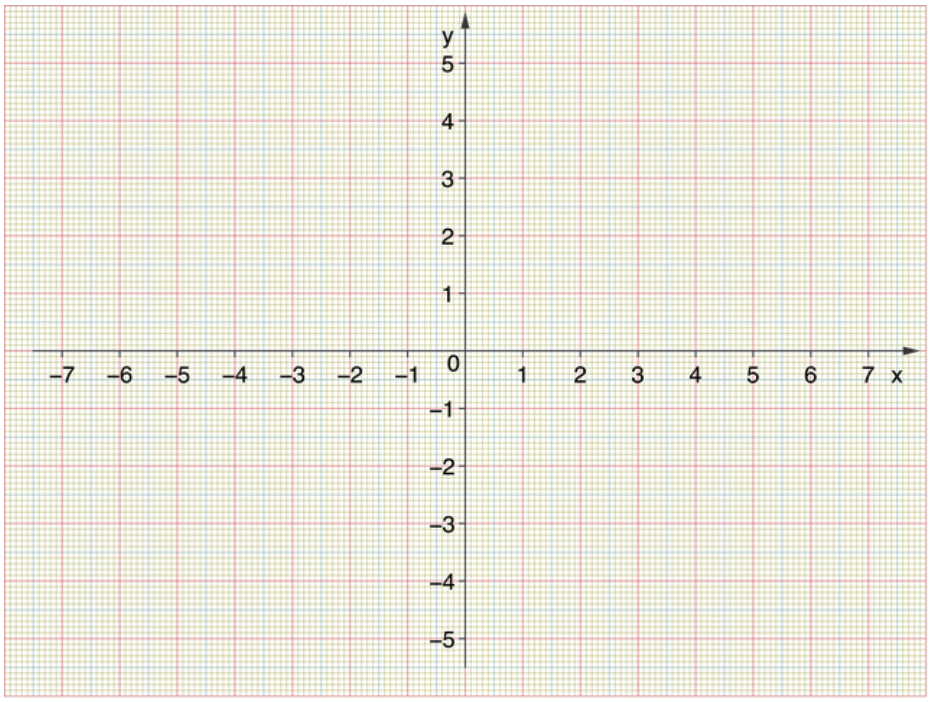
$$f(x) = 2x^2$$

x	*f(x)*
-2	
-1	
0	
1	
2	

5. Calculate *f(x)* and connect them to plot the parabola.

$$f(x) = x^2 + 1$$

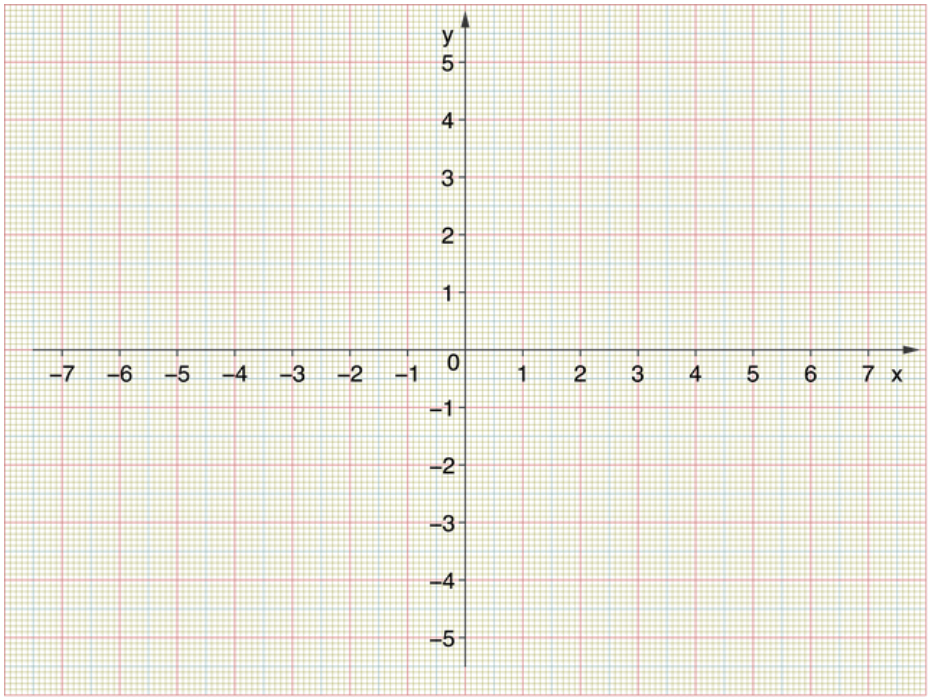
x	*f(x)*
-2	
-1	
0	
1	
2	



6. Calculate *f(x)* and connect them to plot the parabola.

$$f(x) = x^2 - 1$$

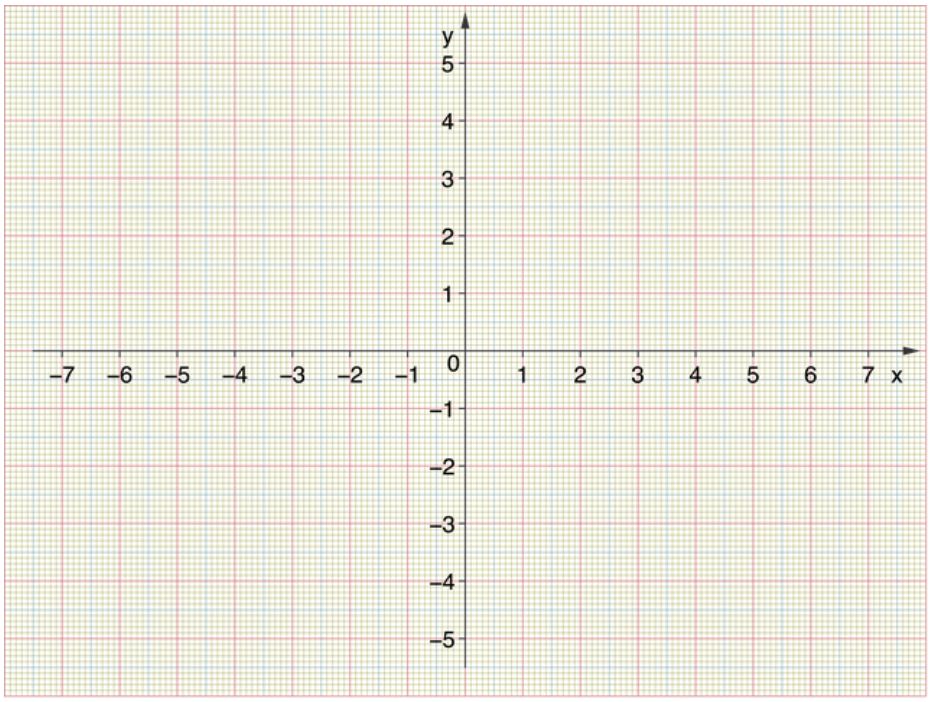
x	*f(x)*
-2	
-1	
0	
1	
2	



7. Calculate *f(x)* and connect them to plot the parabola.

$$f(x) = -x^2 + 1$$

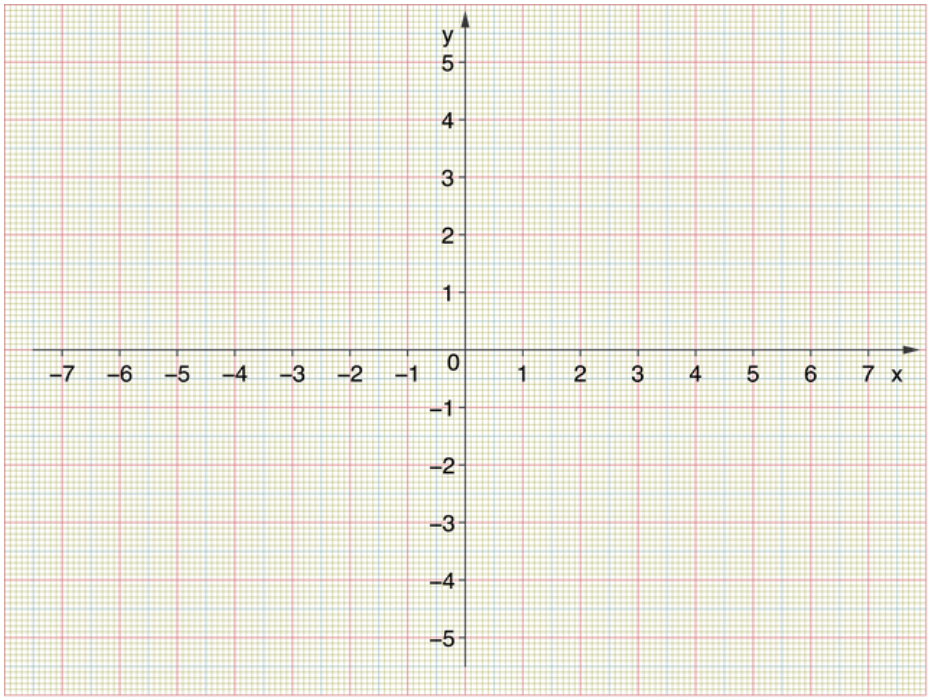
x	*f(x)*
-2	
-1	
0	
1	
2	



8. Calculate *f(x)* and connect them to plot the parabola.

$$f(x) = -x^2 - 1$$

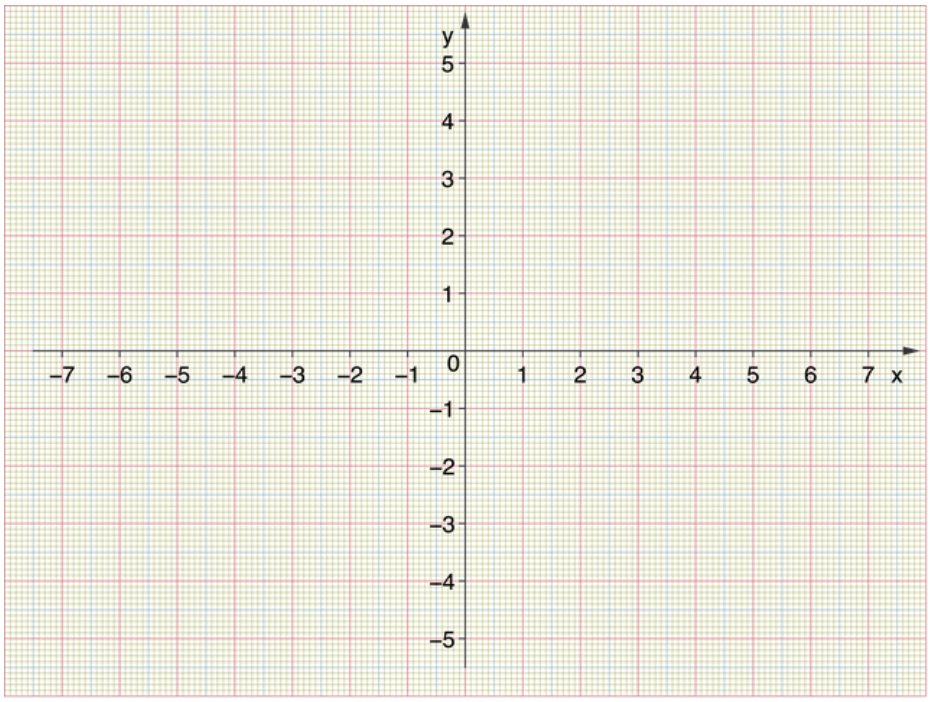
x	*f(x)*
-2	
-1	
0	
1	
2	



9. Calculate *f(x)* and connect them to plot the parabola.

$$f(x) = (x + 1)^2$$

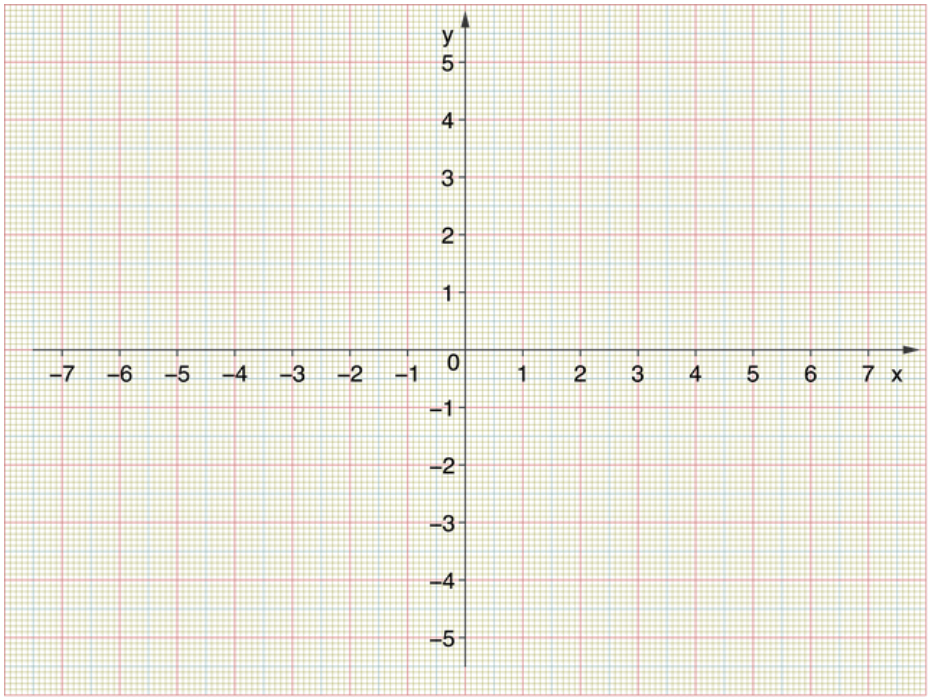
x	*f(x)*
-3	
-2	
-1	
0	
1	



10. Calculate *f(x)* and connect them to plot the parabola.

$$f(x) = (x - 1)^2$$

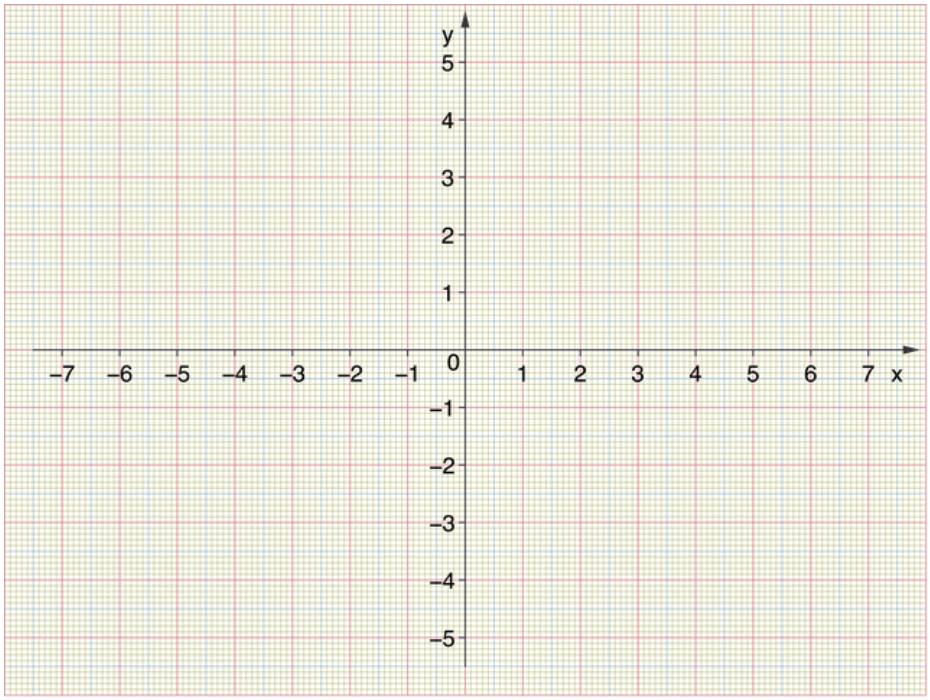
x	*f(x)*
-1	
0	
1	
2	
3	



11. a) Find the vertex at $\frac{-b}{2a}$ and then calculate *f(x)* to plot.

$$f(x) = x^2 - 8x + 15$$

x	*f(x)*



b) Factor and set *f(x)* = 0 to find the zeros (x-intercepts).

c) Find the zeros using the quadratic equation $x = \frac{-b \pm \sqrt{b^2-4ac}}{2a}$

d) Use an online quadratic calculator to find the zeros.

12. Find the vertex at $\frac{-b}{2a}$ and zeros to plot the parabola.

$$f(x) = -x^2 + 8x - 15$$

x	*f(x)*