

Transformations of Quadratic Functions - Worksheet

MCR3U

Jensen

1) For each of the following graphs:

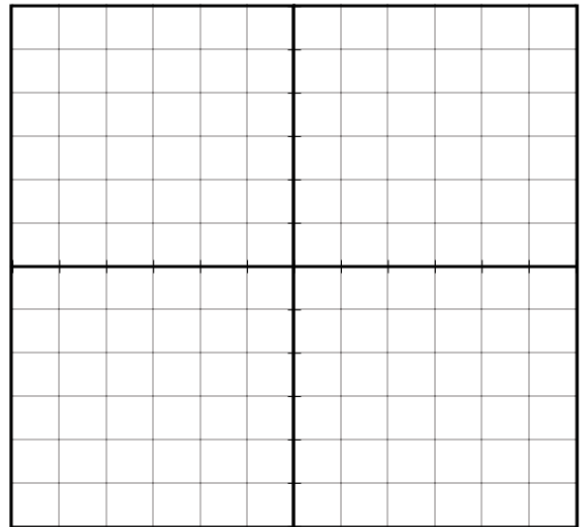
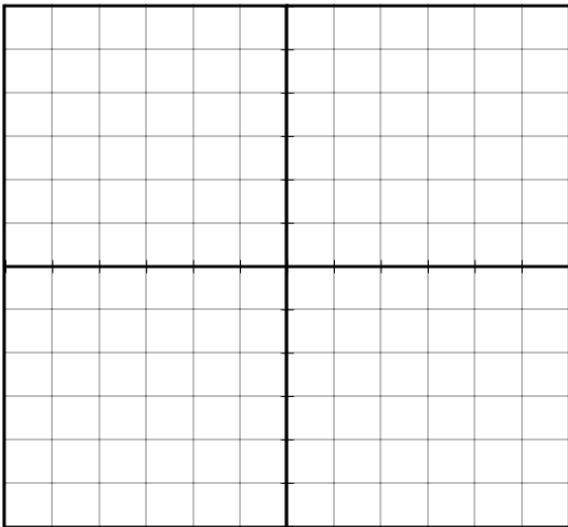
- i) describe the transformations in order (a \rightarrow k \rightarrow d \rightarrow c)
- ii) create a table of values for the transformed function
- iii) graph the transformed function

Key points for
 $y = x^2$

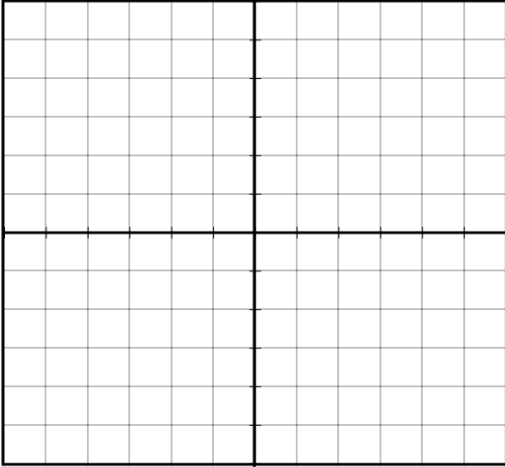
x	y

a) $y = -x^2 + 2$

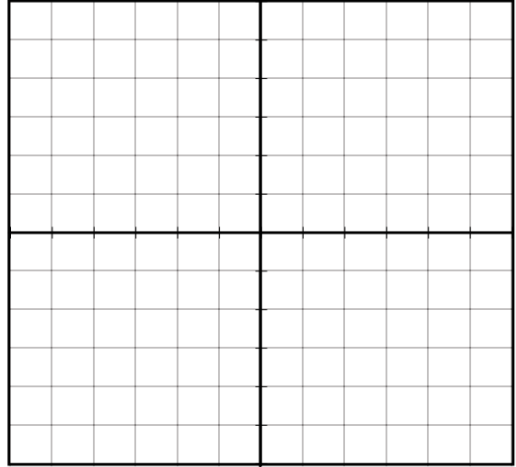
b) $y = (x - 3)^2 + 1$



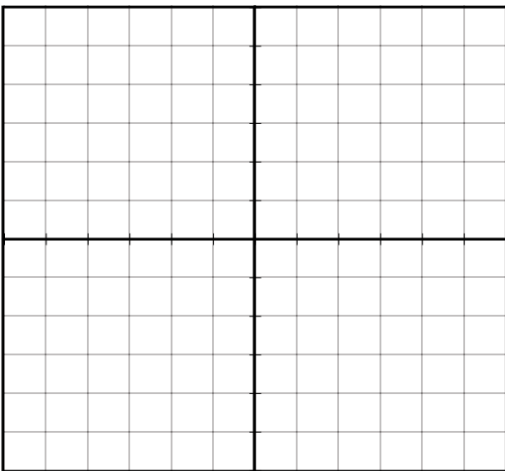
c) $y = 2x^2 - 5$



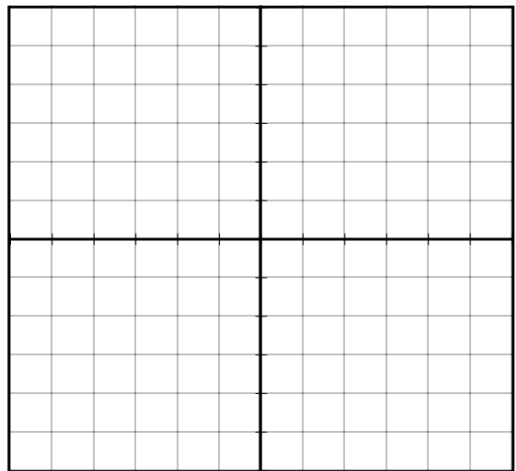
d) $y = -3(x + 1)^2$



e) $y = -(x + 2)^2 + 4$



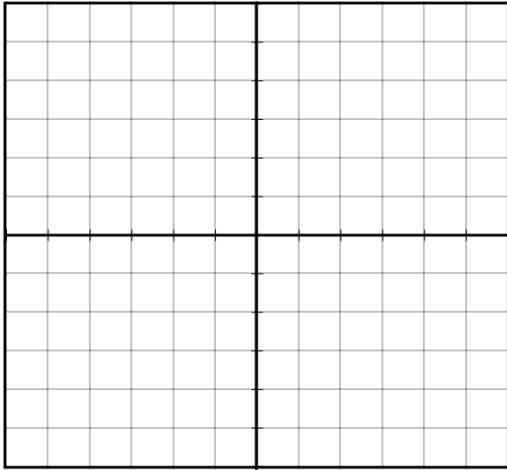
f) $y = -\frac{1}{2}x^2$



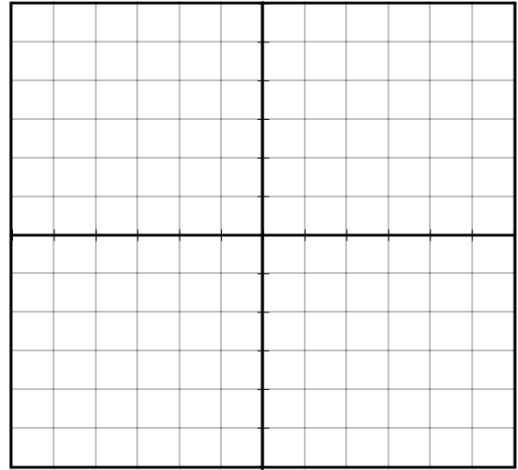
2) For each function $g(x)$:

- i) describe the transformations from the parent function $f(x) = x^2$
- ii) create a table of values of image points for the transformed function
- iii) graph the transformed function and write its equation

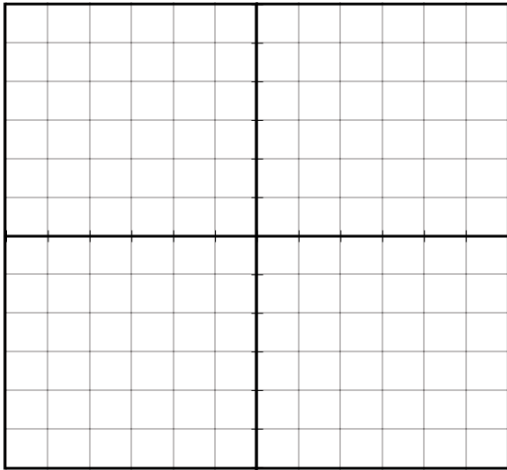
a) $g(x) = -2f\left[\frac{1}{2}(x + 2)\right]$



b) $g(x) = 4f(x - 3) - 2$



c) $y = 2f(x + 4) - 3$



d) $y = \frac{1}{2}f[-2(x + 2)] - 3$

