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QUIZ Chapter 3 Part II

1. Fill the following table:

Quadratic function	$y = 3(x - 4)^2 + 5$	$y = -2(x + 1)^2 + 4$							
Orientation	upward	downward	1						
Axis of symmetry	$x = 4$	$x = -1$	1						
Vertex	(4, 5)	(-1, 4)	2						
Number of zeros	none	2	1						
y-intercept	53	2	1						
Table of values	x	5	6	7	x	0	1	2	2
	y	8	17	32	y	2	-4	-14	2

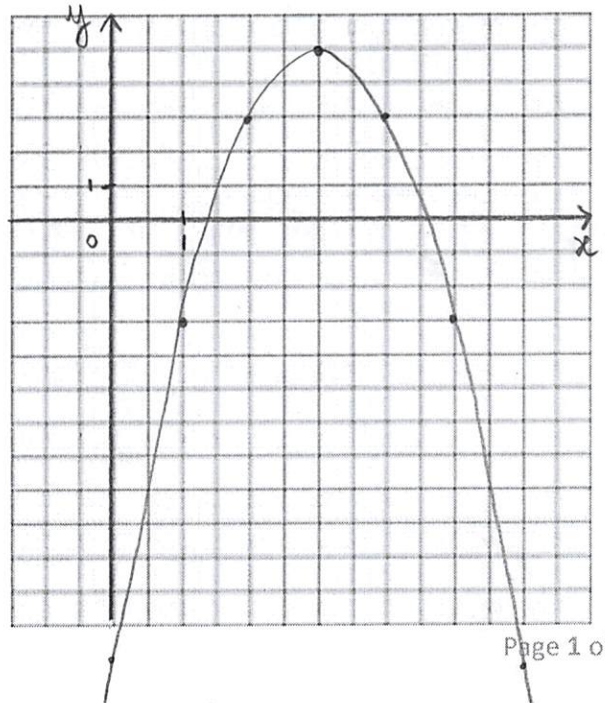
8

1
1
2
1
1
2

2. List the transformations that you should apply to the graph of the reference function $y = x^2$ to obtain the graph of $y = -2(x - 3)^2 + 5$ and do it on the grid below.

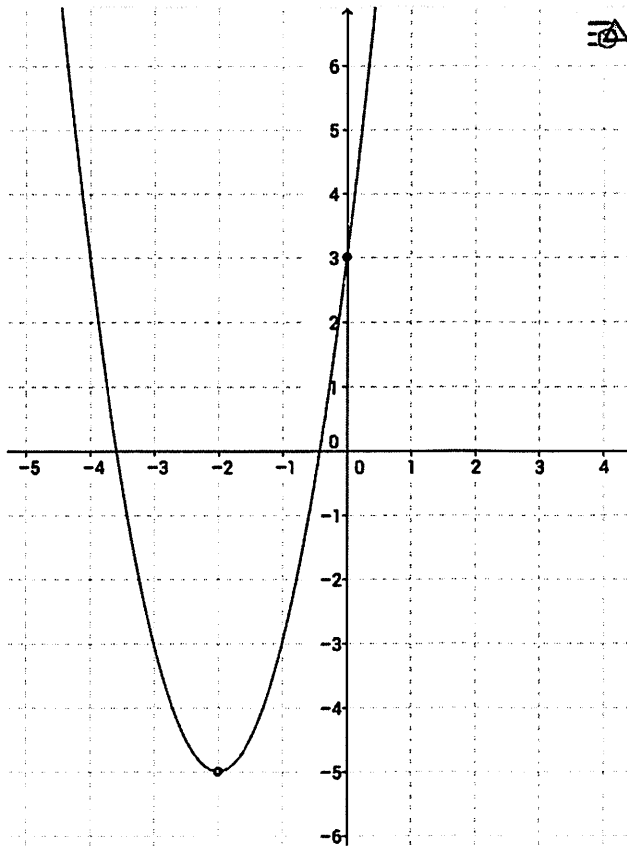
- reflection around x-axis
- vertical stretch factor 2
- horizontal translate 3 units right
- vertical translate 5 units up.

2



2

3. Determine the equation of the following function:



$$\text{vertex: } (-2, -5) \Rightarrow y = a(x+2)^2 - 5$$

$$\text{point: } (0, 3) \Rightarrow 3 = a(0+2)^2 - 5$$

$$8 = 4a$$

$$a = 2$$

2

$$y = 2(x+2)^2 - 5$$