

2.2 Transformers: More Than Meets the y's

A Solidify Understanding Task

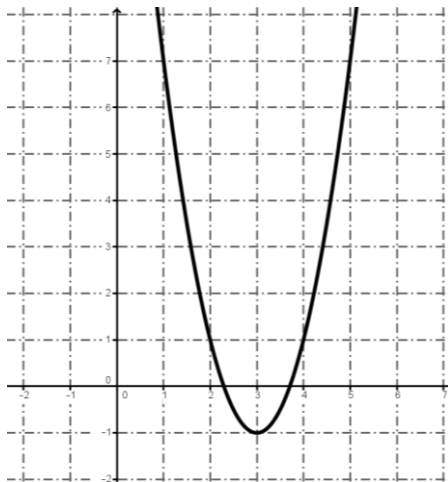
Write the equation for each problem below. Use a second representation to check your equation.

1. The area of a square with side length x , where the side length is decreased by 3, the area is multiplied by 2 and then 4 square units are added to the area.



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2.

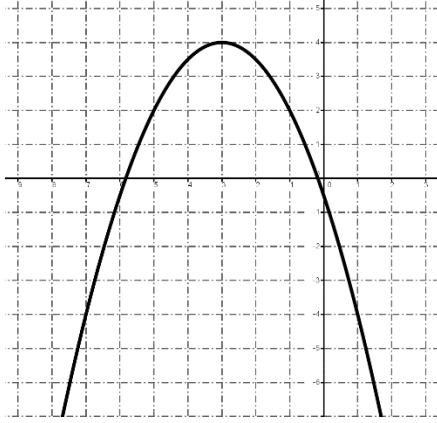


3.

x	$f(x)$
-4	7
-3	2
-2	-1
-1	-2
0	-1
1	2
2	7
3	14
4	23



4.



Graph each equation without using technology. Be sure to have the exact vertex and at least two correct points on either side of the line of symmetry.

5. $f(x) = -x^2 + 3$

6. $g(x) = (x + 2)^2 - 5$

7. $h(x) = 3(x - 1)^2 + 2$

8. Given: $f(x) = a(x - h)^2 + k$

- What point is the vertex of the parabola?
 - What is the equation of the line of symmetry?
 - How can you tell if the parabola opens up or down?
 - How do you identify the dilation?
9. Does it matter in which order the transformations are done? Explain why or why not.

