

Describe the transformations you see compared to the parent function, $f(x) = |x|$

1) $g(x) = 2|x| - 7$

2) $g(x) = -|x + 4|$

3) $g(x) = |2x - 6| + 5$

Write a new function, $g(x)$, with the following transformations of the parent function $f(x) = x^2$

4) Reflect over x-axis, vertical shrink by factor of $\frac{2}{3}$, shift up 7

5) Horizontal shrink by a factor of $\frac{1}{2}$, shift left 3

6) Vertical stretch by a factor of 4, shift right 5, shift down 1

Answers:

1) Vertical stretch by a factor of 2, shift down 7

2) Reflection over the x-axis, shift left 4

3) Horizontal shrink by a factor of $\frac{1}{2}$, shift right 6, shift up 5

4) $g(x) = -\frac{2}{3}x^2 + 7$

5) $g(x) = (2x + 3)^2$

6) $g(x) = 4(x - 5)^2 - 1$