

Name: _____
Date: _____
Class: _____

Algebra
Unit 10
HW 10-5

1) Describe any transformations that take place to $h(x) = |x|$ so that it becomes

$$g(x) = \left| \frac{1}{2}x \right| - 3$$

2) Create a function, $t(x)$, that would stretch $g(x)$ horizontally by a factor of 3 if $h(x) = (x - 4)^2 - 2$.

3) What transformation would cause $g(x) = (2x)^2 - 16$ to be created from $f(x) = x^2 - 16$?

4) What transformations would happen to $f(x)$ to create $g(x) = -\frac{1}{2}f(x)$?

5) Describe the transformations that would happen to $f(x)$ if it was used to create $g(x) = 5f(x) + 1$.

6) Create a function that would reflect $f(x)$ in the x axis, move it up 4, to the left 3, compress it vertically by a value of 2, and stretch it horizontally by a value of 3 if $f(x) = (x - 3)^2 + 4$.

7) Solve: $9x^2 - 7x - 10 = 5x^2 + 4x + 16$