

Algebra 2
4.6 Graphing Dilations

Name: _____
Period: _____

For each function:

- * Name the transformation
- * Find the key points for the parent function
- * Transform the key points for the new function
- * Graph it!

1. $a(x) = 5|x|$ 2. $b(x) = \left|\frac{2}{3}x\right|$ 3. $c(x) = \frac{1}{4}x^2$ 4. $d(x) = \left(\frac{1}{3}x\right)^2$

5. $f(x) = 4\sqrt{x}$ 6. $g(x) = \sqrt{\frac{4x}{3}}$

Using the parent function $y = h(x)$, write an equation after the given transformations.

7. vertical dilation by a factor of $\frac{2}{3}$ 8. horizontal dilation by a factor of 7
9. vertical dilation by a factor of 5, right 4 10. horizontal dilation by a factor of $\frac{1}{3}$, down 9

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