Bellwork Alg 2B Tuesday, October 10, 2017

Write an equation that transforms each parent function according to the written description.

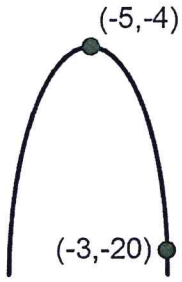
1. Parent Function: $y = x^2$
   Transformations: Moved 9 left and 2 up.
   Three times taller. Upside down.

EQ:

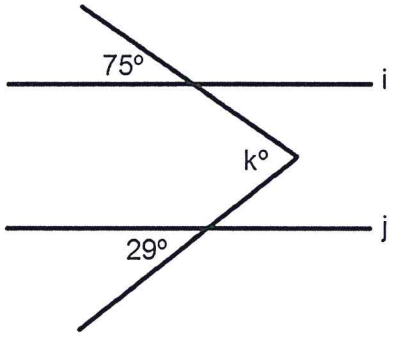
2. Parent Function: $y = |x|$
   Transformations: Moved 1 right and 6 down.
   One-third as tall.

EQ:

3. Write the equation of this quadratic:



4. Use the figure below which is not drawn to scale. Line i is parallel to line j. What is the value of k?



5. Let the function f be defined by $f(x) = x - u$. If $f(4) = -8$, what is the value of $f(2u)$?

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ANSWERS

Write an equation that transforms each parent function according to the written description.

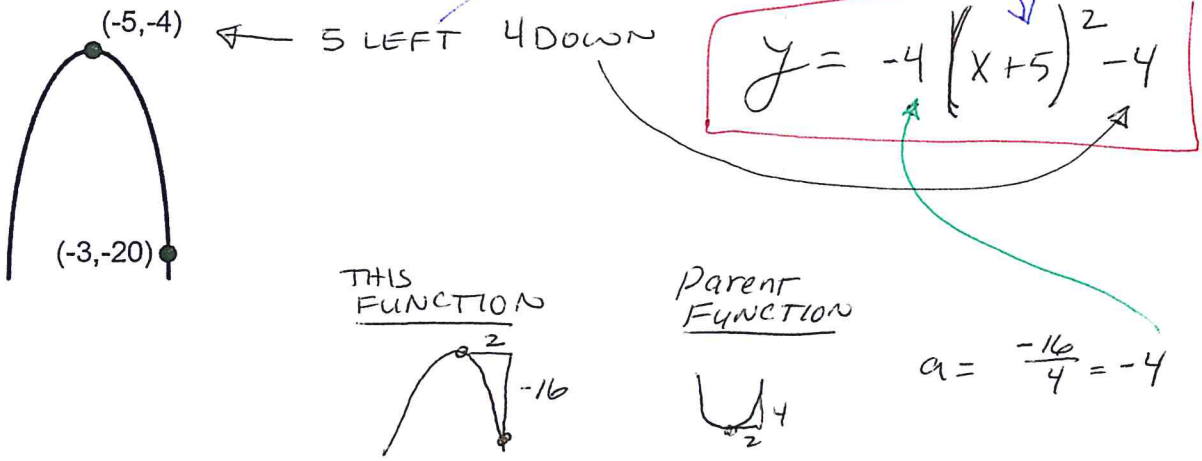
1. Parent Function: $y = x^2$
   Transformations: Moved 9 left and 2 up.
   Three times taller. Upside down.

EQ: $y = -3(x+9)^2+2$

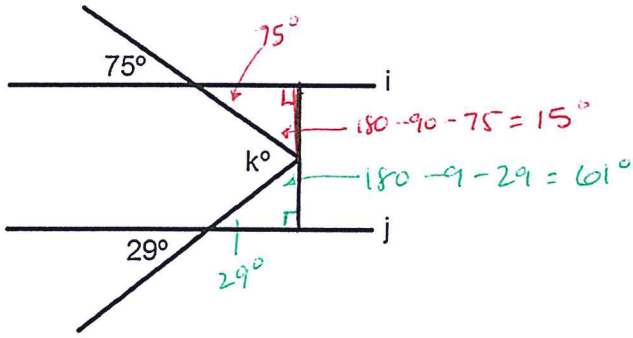
2. Parent Function: $y = |x|$
   Transformations: Moved 1 right and 6 down.
   One-third as tall.

EQ: $y = \frac{1}{3}|x-1|-6$

3. Write the equation of this quadratic:



4. Use the figure below which is not drawn to scale. Line i is parallel to line j. What is the value of k?



$K = 180 - 61 - 15$

$K = 104°$

5. Let the function f be defined by $f(x) = x - u$. If $f(4) = -8$, what is the value of $f(2u)$?

$-8 = 4 - u$

$-4 \quad -4$

$-12 = -u$

$u = 12$

$f(2u) = f(24)$

$f(24) = 24 - u$

$= 24 - 12$

$= 12$