Algebra 2 Bellwork Monday, March 7, 2016

The following equations review skills that you already have that will be used in the rest of this chapter.

1. Solve for y. $x = \frac{(2y-3)^5 + 8}{7} - 1$

$y =$

2. Solve. $(x+2)^2 = x + 14$

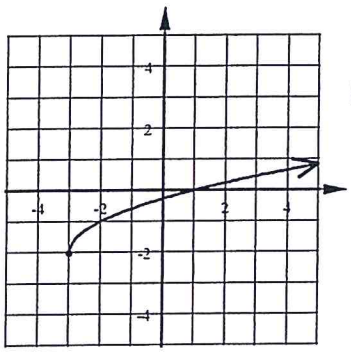
$x =$

3. Given the function below describe ALL the transformations that have occured to the parent function $y = x^2$

$y = -8(x+3)^2 - 9$

4. Find the Domain and Range of each graph.

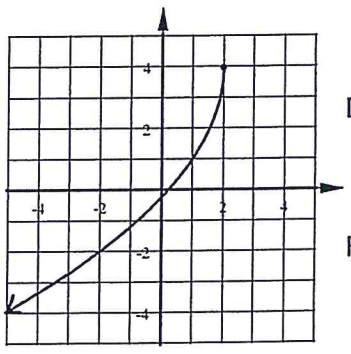
a).



Domain:

Range:

b).



Domain:

Range:

Algebra 2 Bellwork Monday, March 7, 2016

Answers

The following equations review skills that you already have that will be used in the rest of this chapter.

1. Solve for y. $x = \frac{(2y-3)^5 + 8}{7} - 1$

$y = \frac{\sqrt[5]{7(x+1) - 8} + 3}{2}$

2. Solve. $(x+2)^2 = x + 14$ $\longrightarrow$ $x^2 + 4x + 4 = x + 14$

$-x \quad -14 \quad -x \quad -14$

$x^2 + 3x - 10 = 0$

$(x+5)(x-2) = 0$

$x = -5, 2$

$x = -5, 2$

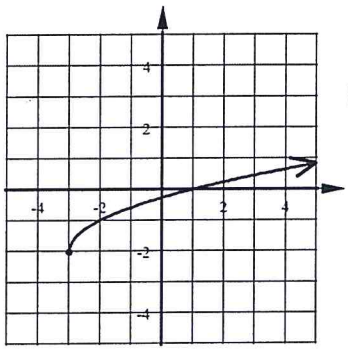
3. Given the function below describe ALL the transformations that have occured to the parent function $y = x^2$

$y = -8(x+3)^2 - 9$

* x-axis reflection → upside down
* Vertical stretch factor = 8 → 8 times taller
* Vertical translation → 9 units down
* Horizontal translation → 3 units left

4. Find the Domain and Range of each graph.

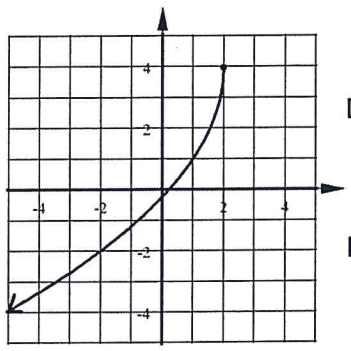
a).



Domain: $x \geq -3$

Range: $y \geq -2$

b).



Domain: $x \leq 2$

Range: $y \leq 4$