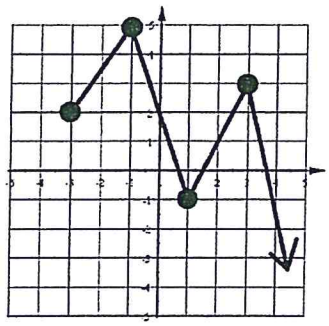
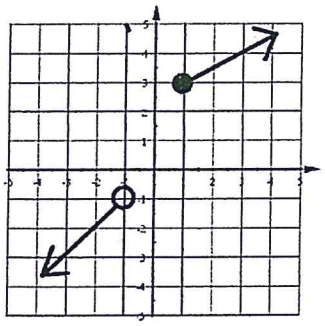
Algebra 2 Bellwork Monday, March 14, 2016

1. State the Domain and Range of the Inverse Relation of each.

a) 

b) 

2. Write the equation of the inverse relation for each.

a) $f(x) = \dfrac{7(x-9)^3+1}{8}$

b) $y = \dfrac{2}{x-7} + 1$

3. Use what you may know about the graph of each or graph them using the graphing calculator to determine if the inverse relation of each is a function or not.

a) $f(x) = -\frac{1}{2}|x-3|+4$

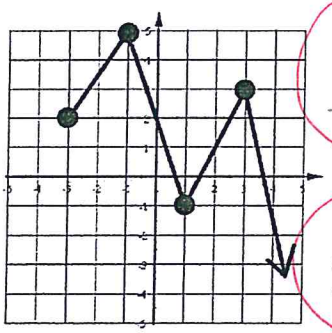
b) $y = 2^{x+3} - 6$

c) $y = \dfrac{1}{x+2} - 3$

d) $f(x) = 0.2x^4 - 3.2x^2$

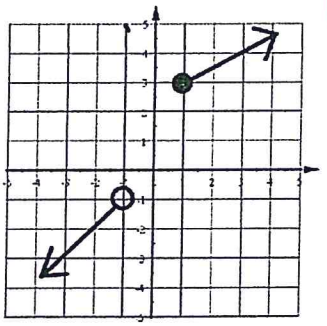
Algebra 2 Bellwork Monday, March 14, 2016 Answers

1. State the Domain and Range of the Inverse Relation of each.

a) 

Domain of $f^{-1}(x)$: $x \leq 5$

Range of $f^{-1}(x)$: $y \geq -3$

b) 

Domain of $f^{-1}(x)$: $x < -1,\ x \geq 3$

Range of $f^{-1}(x)$: $y < -1,\ y \geq 1$

2. Write the equation of the inverse relation for each.

a) $f(x) = \dfrac{7(x-9)^3+1}{8}$ $\quad f^{-1}(x) = \sqrt[3]{\dfrac{8x-1}{7}} + 9$

b) $y = \dfrac{2}{x-7} + 1$

$\dfrac{x-1}{1} = \dfrac{2}{y-7} \rightarrow y-7 = \dfrac{2}{x-1}$

$y = \dfrac{2}{x-1} + 7$

3. Use what you may know about the graph of each or graph them using the graphing calculator to determine if the inverse relation of each is a function or not.

a) $f(x) = -\frac{1}{2}|x-3|+4$ No

b) $y = 2^{x+3} - 6$ Yes

c) $y = \dfrac{1}{x+2} - 3$ Yes

d) $f(x) = 0.2x^4 - 3.2x^2$ No