

Bellwork Alg 2 Wednesday, September 25, 2019

1. The table of values below comes from a linear function. Create a table of values for the inverse by switching the columns. Use this new table of values to write the equation of the inverse.

Original Linear Function:

X	Y
1	-1
2	-6
3	-11
4	-16
5	-21

Inverse:

X	Y

Equation of the inverse:

2. Write the equation for the inverse of each linear function by first rewriting each equation by switching x and y , then resolving the new equation for y .

a) $y = 7x + 15$

b) $y = \frac{3}{2}x - 11$

Bellwork Alg 2 Wednesday, September 25, 2019

1. The table of values below comes from a linear function. Create a table of values for the inverse by switching the columns. Use this new table of values to write the equation of the inverse.

Original Linear Function:

X	Y
1	-1
2	-6
3	-11
4	-16
5	-21

Inverse:

X	Y
-1	1
-6	2
-11	3
-16	4
-21	5

$$\Delta x = -6 - 1 = -6 + 1 = -5$$

$$\Delta y = 2 - 1 = 1$$

Equation of the inverse:

$$m = -\frac{1}{5}$$

$$y = -\frac{1}{5}x + b$$

using $(-1, 1)$ to find y-int:

$$1 = -\frac{1}{5}(-1) + b$$

$$1 = \frac{1}{5} + b$$

$$-\frac{1}{5} \quad -\frac{1}{5}$$

$$b = \frac{4}{5}$$

$$y = -\frac{1}{5}x + \frac{4}{5}$$

2. Write the equation for the inverse of each linear function by first rewriting each equation by switching x and y , then resolving the new equation for y .

a) $y = 7x + 15$

$$\longrightarrow x = 7y + 15$$

$$\frac{x - 15}{7} = \frac{7y}{7}$$

EQUATION
OF THE
INVERSE

$$y = \frac{x - 15}{7} = \frac{x}{7} - \frac{15}{7} = \frac{1}{7}x - \frac{15}{7}$$

b) $y = \frac{3}{2}x - 11$

$$\longrightarrow x = \frac{3}{2}y - 11$$

$$\frac{2}{3}(x + 11) = \frac{3}{2}y \cdot \frac{2}{3}$$

EQUATION
OF THE
INVERSE

$$y = \frac{2}{3}(x + 11) = \frac{2}{3}x + \frac{22}{3}$$