Bellwork Alg 2 Tuesday, September 24, 2019

1. Write a linear equation to model the data in this table:

X	Y
1	−3
2	−1
3	1
4	3
5	5

2. a. Create a table for the inverse relation to problem 1 by switching the x and y values.

X	Y

b. Use this table write the equation of the inverse relation.

c. How does the equation of the inverse relation compare to the equation of the original relation from problem 1?

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ANSWERS

1. Write a linear equation to model the data in this table:

X	Y
1	−3
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$\Delta x = 2-1 = 1$ $\Delta y = -1--3 = -1+3 = 2$

$m = \frac{2}{1} = 2$

$y = 2x + b$

Find b using $(1, -3)$

$-3 = 2(1) + b$

$-3 = 2 + b$

$-2 \quad -2$

$b = -5$

$y = 2x - 5$

2. a. Create a table for the inverse relation to problem 1 by switching the x and y values.

b. Use this table write the equation of the inverse relation.

X	Y
−3	1
−1	2
1	3
3	4
5	5

$\Delta x = -1--3 = -1+3 = 2$ $\Delta y = 2-1 = 1$

$m = \frac{1}{2}$

$y = \frac{1}{2}x + b$

Find b using $(-3, 1)$

$1 = \frac{1}{2}(-3) + b$

$1 = -3/2 + b$

$+3/2 \quad +3/2$

$b = 1 + 3/2 = \frac{2}{2} + \frac{3}{2} = \frac{5}{2}$

$y = \frac{1}{2}x + \frac{5}{2}$

$= \frac{x}{2} + \frac{5}{2}$

$y = \frac{x+5}{2}$

c. How does the equation of the inverse relation compare to the equation of the original relation from problem 1?

The math operations of the inverse relation are the inverse operations of what are found in the original function