Name _____

4-1 Reteach to Build Understanding

Inverse Variation and the Reciprocal Function

An inverse variation is a function of the form $y = \frac{k}{x}$, where k is a constant that is not 0. As one variable increases, the other decreases proportionally.

1. Use the inverse variation function to fill in the values for y when $k = 48$. Use the equation $y = \frac{k}{x}$ in each step to find the value for y. The first one is done.

Equation $y = \frac{k}{x}$

$y = \frac{48}{x}$	$y = \frac{48}{1}$	$y = \frac{48}{2}$	$y = \frac{48}{3}$	$y = \frac{48}{4}$	$y = \frac{48}{6}$	$y = \frac{48}{8}$
x	1	2	3	4	6	8
y	48					

2. Kona completed the table of values for an inverse variation, based on the equation $y = \frac{12}{x}$. Explain the error Kona made. Then fix the table to make the y-values accurate.

x	1	2	3	4	12	24
y	12	24	36	48	144	288

When $x = 1$, $y = \frac{12}{1} = 12$.

When $x = 2$, $y = \frac{12}{2} =$ _____. Fill in the table.

When $x = 3$, $y = \frac{12}{3} =$ _____. Fill in the table.

x	1	2	3	4	12	24
y	12					

Continue finding the missing values by substituting the values in the equation.

3. Fill in the chart to show an inverse variation using the equation $y = \frac{6}{x}$.

Substitute the x-values in the equation to find the values for y.

x	1	2	3	4	5	6	
y	6						0.5