

mhtml:file:///W:/WallerW/Courses/math1301/new_math1301_notes_1-22_2.mht

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 Class: Math 1301 Date: 1-22-2013
 Topic/Section: _____

Examples and Vocabulary	Notes/Comments/Questions
① What is the change in the number of fatal crashes from 1997 to 2002? Interpret. $\text{change} = \text{last} - \text{first} = C_2 - C_1$ $= 625 - 533 = 92$	From 1997 to 2002, the number of fatal crashes increased by 92.
② What is the change in y from $x = 12$ to $x = 17$? Interpret. $\text{change} = \text{last} - \text{first}$ $= 419 - 625 = -206$ From 2002 to 2007, the number of fatal accidents decreased 206.	What mistakes can we make in interpreting change?

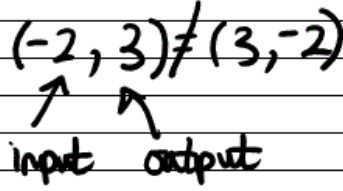
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Examples and Vocabulary	Notes/Comments/Questions
$x =$ Elapsed years from 1980 (0 (5 (10 (15 (20 (25 (30	$y =$ Number of centenarians in the U.S. (in thousands) 32.2) $\rightarrow$ (0, 32.2) 35.0) $\rightarrow$ (5, 35.0) 37.5) $\rightarrow$ (10, 37.5) 44.2) $\rightarrow$ (15, 44.2) 50.0) $\rightarrow$ (20, 50.0) 51.0) $\rightarrow$ (25, 51.0) 53.4) $\rightarrow$ (30, 53.4)
domain = $\{0, 5, 10, 15, 20, 25, 30\}$ range = $\{32.2, 35.0, 37.5, 44.2, 50.0, 51.0, 53.4\}$	

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Examples and Vocabulary	Notes/Comments/Questions
③ What is the percent change in y from $x=5$ to $x=15$? Interpret. $\text{percent change} = \frac{\text{last} - \text{first}}{\text{first}} \times 100\%$ $= \frac{44.2 - 35}{35} \times 100\%$ $= \frac{9.2}{35} \times 100\%$ $\approx 26.3\%$	From 1985 to 1995, the number of antenarions increased by 26.3%. Why is percent change useful in measuring change? How do we calculate percent change? How do we interpret it?
④ What is the percent change in y from $x=25$ to $x=30$? Interpret. $\text{percent change} = \frac{\text{last} - \text{first}}{\text{first}} \times 100\%$ $= \frac{53.4 - 51}{51} \times 100\%$ $= \frac{2.4}{51} \times 100\% = 4.71\%$	From 2005 to 2010, the number antenarions increased by 4.71%.

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 Topic/Section: Relations and Scatter Plots

Examples and Vocabulary	Notes/Comments/Questions
<u>Relation</u> - a set of ordered pairs. We call an x-coordinate an input and a y-coordinate an output.	$(-2, 3) \neq (3, -2)$ 
<u>Domain</u> - the set of all x-coordinates of a relation (i.e. the set of inputs)	
<u>Range</u> - the set of all y-coordinates of a relation (i.e. the set of outputs)	

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Examples and Vocabulary	Notes/Comments/Questions
⑤ Express the table on page 3 as a relation.	How can we think of a table of data pairs as a relation? How do we find the domain and range?

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