4.4: Find Slope and Rate of Change
Goals: *Find slope of a line given two points
*Find slope of a graphed line
*Find and interpret rate of change

| Definition | Formulas | | | |
|-----------------|---------------------|--|--|--|
| <u>SLOPE</u> - | Formula When To Use | | | |
| | | | | |
| <u>SYNONYM:</u> | | | | |
| | | | | |
| | | | | |
| Direction | Zero vs. Undefined | | | |
| | | | | |
| | • | | | |

Find the slope of the line that passes through the given points. (Be sure to write down the formula you are using)

Ex: (5, 2) and (4, -1)

Ex: (-2, 3) and (4, 6)

Ex:
$$\left(\frac{9}{2},5\right)$$
 and $\left(\frac{1}{2},-3\right)$

Ex: (3, 4) and (-2, 4)

Ex: (-5, 1) and (-5, 3)

Find the slope of the line graphed.





Ex:

| | | | | _ | y / | / | / | |
|---|---|------|----|----|--------|----|---|-----|
| | | | | 2 | (0, | 3) | | |
| | / | / | | -1 | | | _ | |
| 7 | (| 4, 0 |)) | -1 |] | | | 3 x |
| | | | | -3 | _ | | | - |

Ex:



Ex:



Ex:



Ex: Gas prices went from \$3 to \$4 between June 1st of 2008 and August 1st of that same year. Find the rate of change for the price of gas during that time period?

Ex: Gas prices then began to fall after this spike. They fell back to \$2 by November 19th. What is the rate of change of the price of gas for this time period?

Ex: Which time period had a greater rate of change? Why?

Ex: The table below shows the cost of using a computer at the internet café for a given amount of time. Find the rate of change with respect to time.

| Time (hrs) | 2 | 4 | 6 |
|------------|---|----|----|
| Cost (\$) | 7 | 14 | 21 |