Name:_____   Date:_____

Notes
Algebra Section 4.4
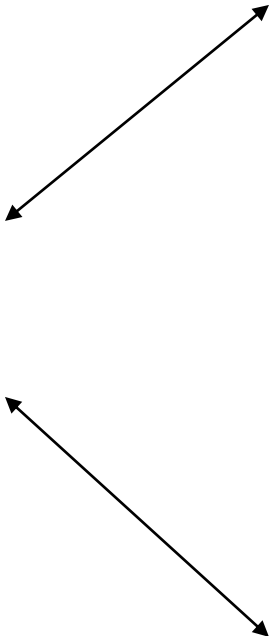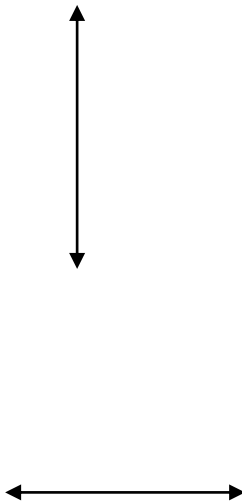Pages 235-242

Goal: "You will find the slope of a line given two points"
        "You will find the slope of a graphed line"
        "You will find and interpret rate of change"

Definition	Formulas
SLOPE - **SYNONYM:**	<table><tr><td>**Formula**</td><td>**When To Use**</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>
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)
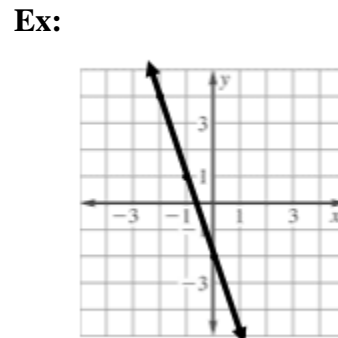
Ex: (5, 2) and (4, –1)

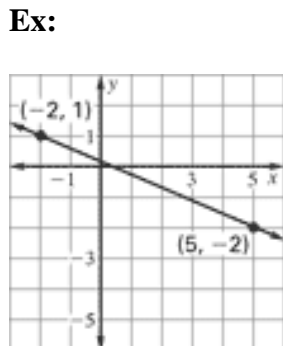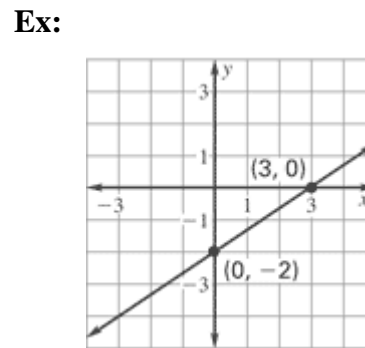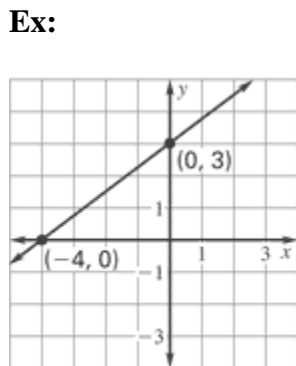**Ex:** (–2, 3) and (4, 6)
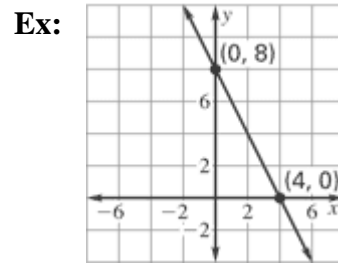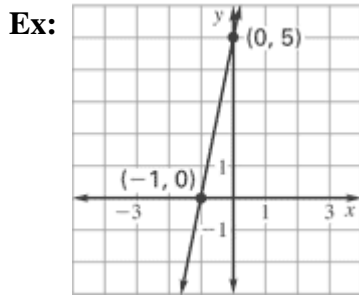
Ex: $\left(\dfrac{9}{2}, 5\right)$ and $\left(\dfrac{1}{2}, -3\right)$

Ex: (3, 4) and (–2, 4)

Ex: (–5, 1) and (–5, 3)

Find the slope of the line graphed.

Ex:

Points: $(0, 5)$, $(-1, 0)$

Ex:

Points: $(0, 8)$, $(4, 0)$

Ex:

Points: $(0, 3)$, $(-4, 0)$

Ex:

Points: $(3, 0)$, $(0, -2)$

Ex:

Points: $(-2, 1)$, $(5, -2)$

Ex:

Rate of Change:

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