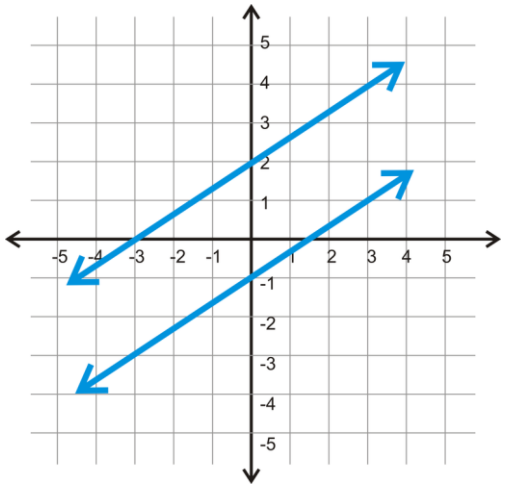
Topic: Creating Lines **Date**: _____

Learning Objective(s)_____:

_____

_____

Main Ideas/ Questions	**Notes**
Linear Characteristics Refresh	Lines are normally written in _____ form Y = _____ X + _____ • Slope is represented by the _____ variable • Y-Intercept (0, y) is represented by the _____ variable • A point ON the line is represented by the _____ variables.
Refresh Examples	1. Write a linear equation with a slope of 2 and a y-intercept of (0, -4). 2. Write a linear equation with a slope of 2 and goes through the point (-1, 2). 3. Write a linear equation with a slope of $\frac{1}{3}$ and goes through the point (2, -9) 4. Write a linear equation with an undefined slope that goes through the point (-4, 7)
Parallel Lines	**Parallel Lines** – They have the _____ slope! This is why parallel lines **DO NOT TOUCH!** 

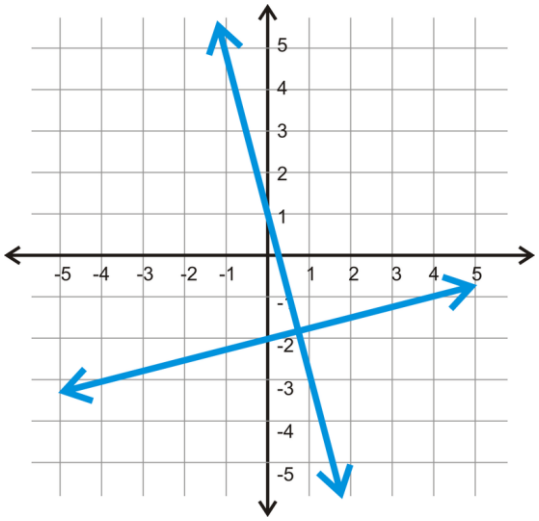
Topic: Creating Lines **Date**: _____

Main Ideas/ Questions

Perpendicular and Parallel Lines Characteristics

Notes

Perpendicular Lines – They have _____ _____ slopes of each other! This is why perpendicular lines always create a **90°** **ANGLE** at their intersection point!



Examples

1. Find the slope of a parallel line to y = 3x + 2

2. Find the slope of a perpendicular line to y = 3x + 2

3. Find the slope of a parallel line to x = 5

4. Find the equation of a parallel line to y = 3x + 2 and goes through the point (1, 2).

5. Find the equation of a perpendicular line to y = 3x + 2 and goes through the point (1, 2).

6. Find the equation of a line parallel to y = -3 and passes through the point (8, -3).

7. Find the equation of a line perpendicular to x = 4 and passes through the point (3, 6).