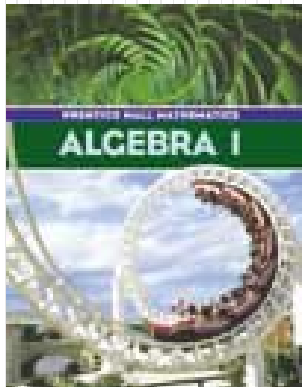
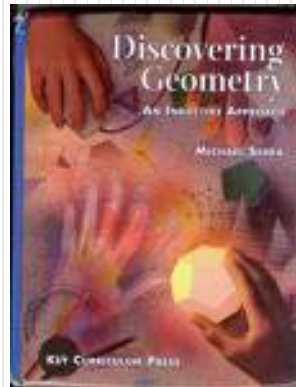


# Mr. Northcutt's Math Classes Class Presentation

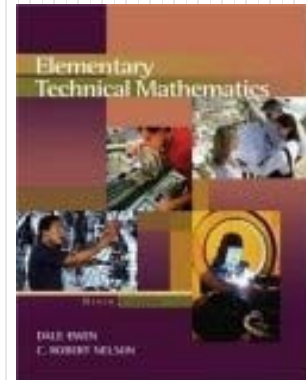
February 19, 2009 (105)



Math 1



Math 2



Applied Math



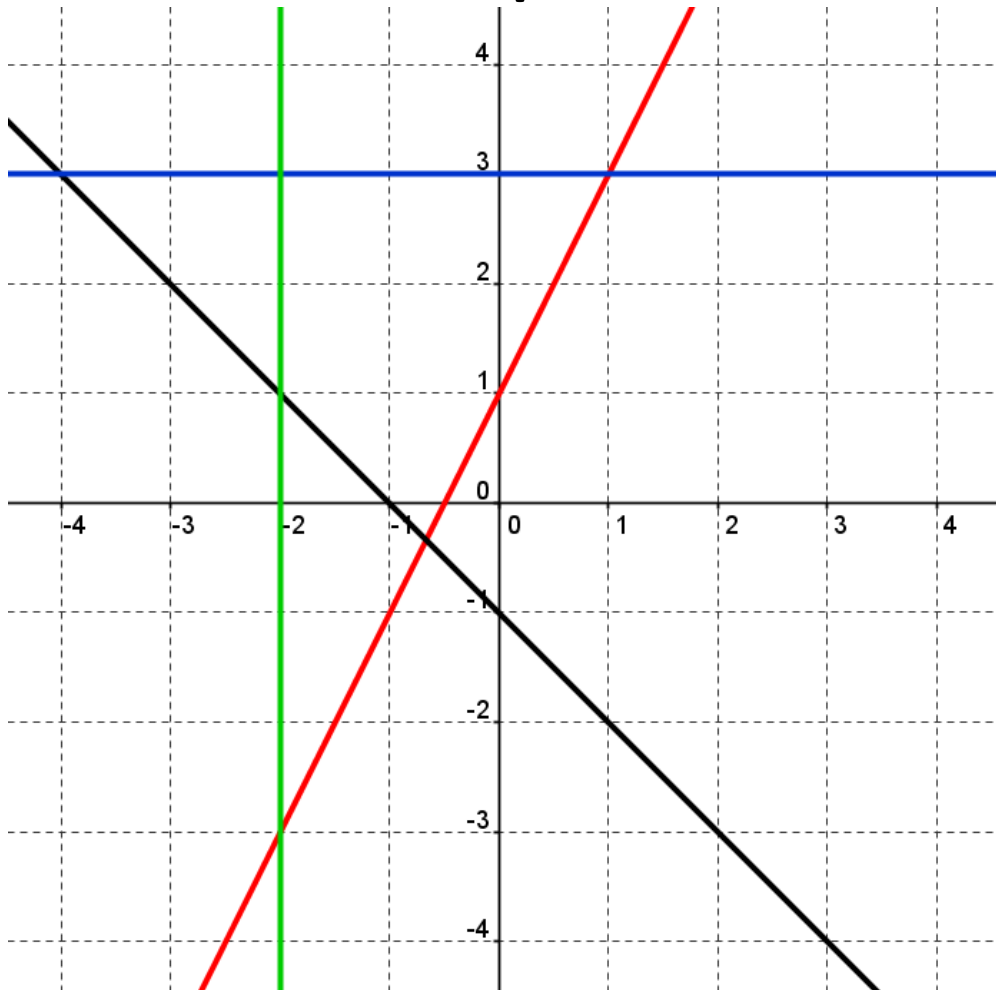
# Math 1 – Daily Summary

- **Announcements**
  - **QUIZ on Sections 6-1 thru 6-2 tomorrow!**
- **Class Objectives – *What you should learn today!***
  - Equation of a Line (Slope-Intercept Form)
    - Write an equation of a line given a graph
    - Write an equation of a line given 2 points
    - Write an equation of a line given 1 point and its slope
- **Assignment**
  - **Section 6-2: 1-49 ODD**



# Review: Calculating Slope

- Calculate the Slope of the following lines:



1. Select 2 Points
2. Calculate  $\Delta x$  and  $\Delta y$
3. Calculate Slope ( $\Delta y/\Delta x$ )



# Linear Equations

- An equation whose graph is a **LINE** is a **LINEAR EQUATION**.
- Examples of **Linear** Equations:

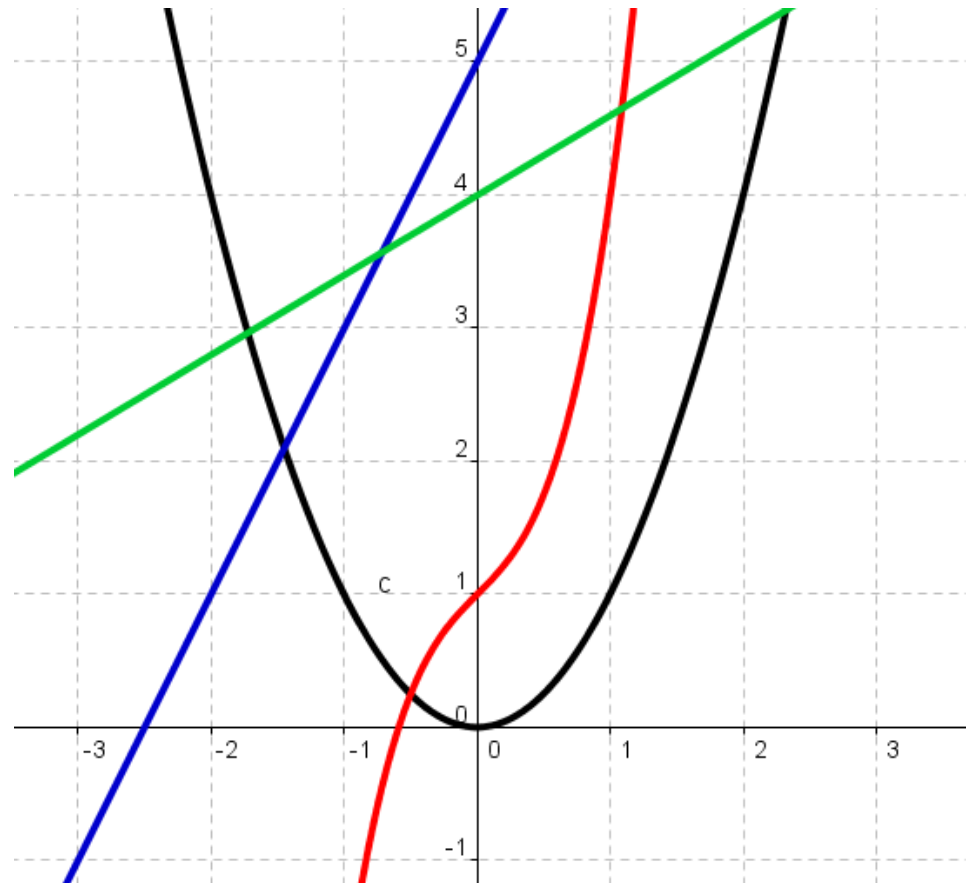
$$y = 2x + 5$$

$$f(x) = \frac{3}{5}x + 4$$

- **NOT Linear** Equations:

$$y = x^2$$

$$f(x) = 2x^3 + x + 1$$



Remember **LINEAR** Polynomials  
(Degree)?

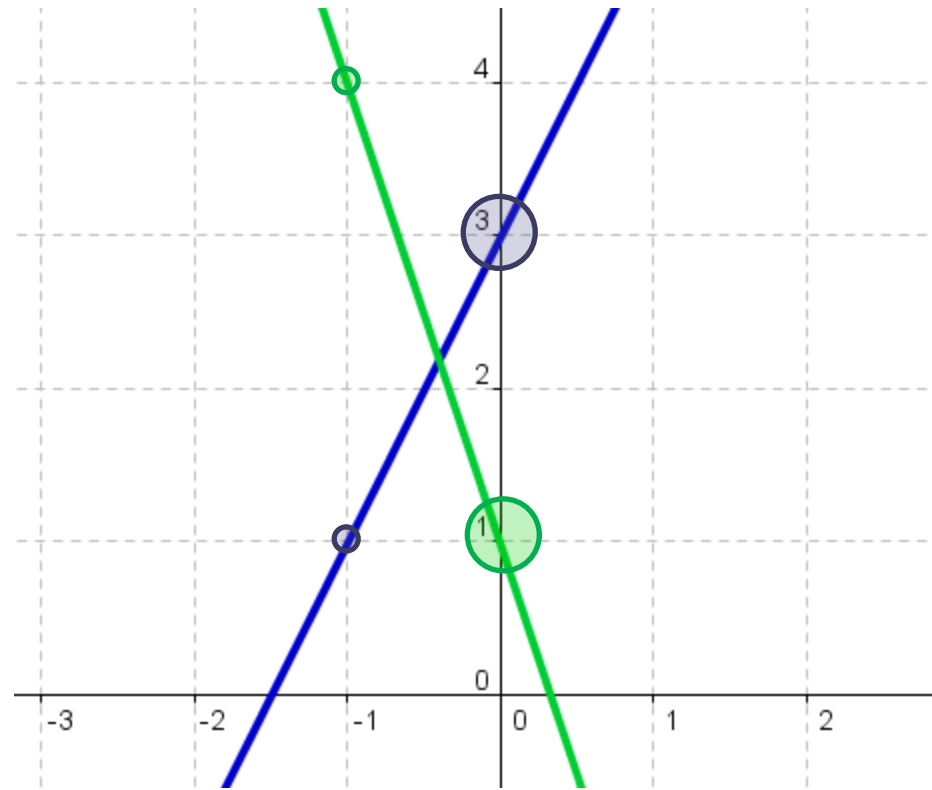
# Slope-Intercept Form (for Linear Eqn.)



- **Y-intercept:**
  - y coordinate of point where line crosses the y-axis.
- If we know **Slope** and **y-intercept**, we can write the **equation of the line**.

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

- **Substitute value of Slope and the y-intercept  $(x_1, y_1)$  & solve for y in terms of x.**



# Slope-Intercept Form of Linear Eqn.



- Slope-Intercept Form of a Linear Equation:

$$y = mx + b$$



**Slope**

*(rate of change)*

**y-intercept**

*(initial value - where to start)*

- Find the Slope and y-intercept for the linear equations:

$$y = -2x + 1$$

$$y = -\frac{2}{3}x$$

# Applications of Slope-Intercept Form



- **Write equation of line with given slope and y-intercept:**

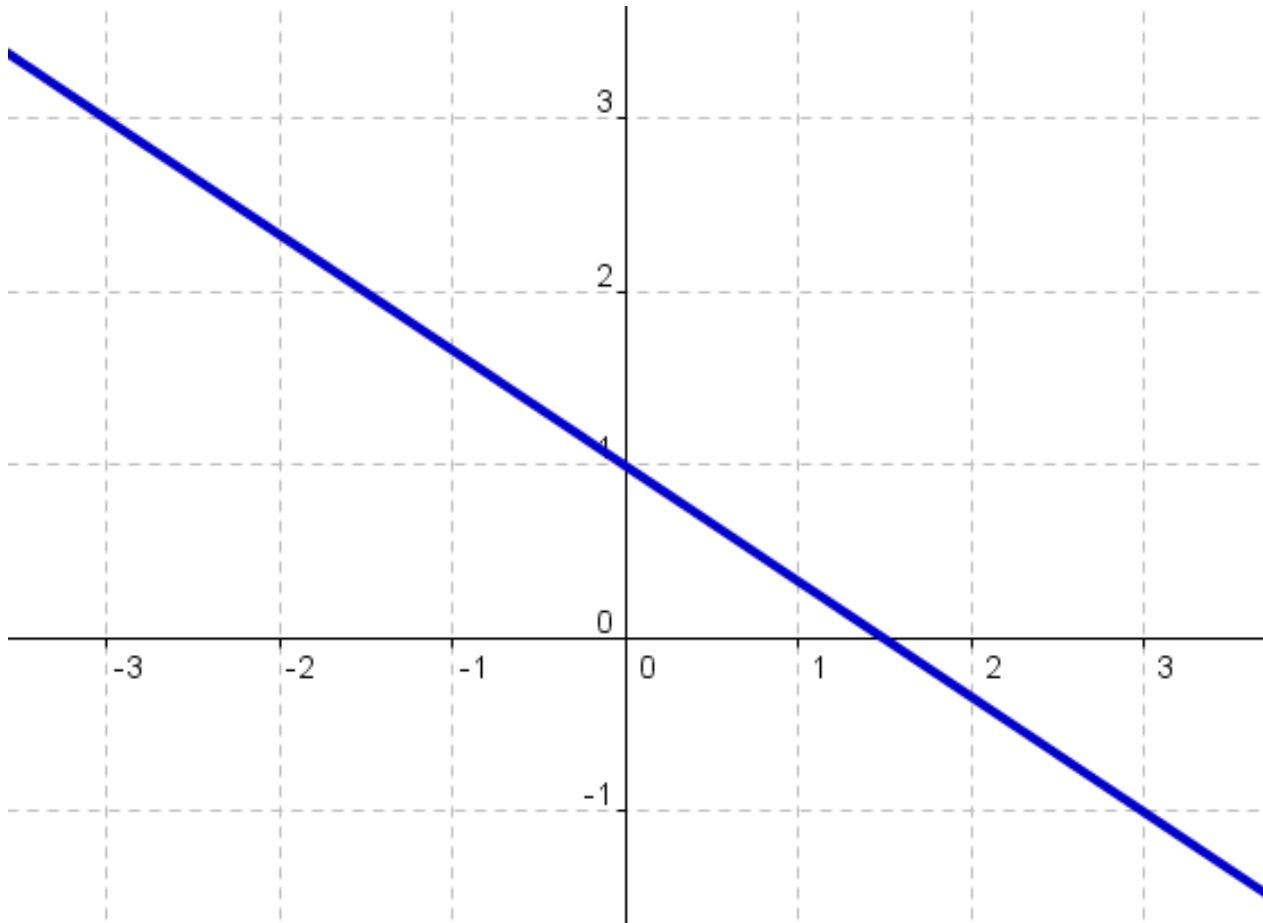
$$\textit{Slope} = \frac{1}{3}; \textit{y-intercept} = -3$$

$$m = -3; b = 0$$

# Applications of Slope-Intercept Form



- Write equation of line from the graph:



1. Find Slope.
2. Find y-intercept.





# One More Example...

- Find the Slope (**m**) and y-intercept (**b**) of each equation.

Solve for y → Change to  
*Slope-Intercept Form*

$$3y - 6 = 9x$$

$$2y - 4n = 6x$$

Could you graph the equations?



# Math 2 – Daily Summary

- **Announcements**
  - **QUIZ on Lessons 10-1 thru 10-3 tomorrow!**
- **Class Objectives – *What you should learn today!***
  - Apply Pythagorean Theorem to “real world” problems.
- **Assignment**
  - **Section 10.3: 1-13**



# Applied Math – Daily Summary

- **Announcements**
  - **Math-Caching Project this Week!**
- **Class Objectives – *What you should learn today!***
  - Review Math Caching Project Rubric (grading criteria)
- **Assignment**
  - Continue Math Caching Project
    - **Due on Monday, February 23<sup>rd</sup>**