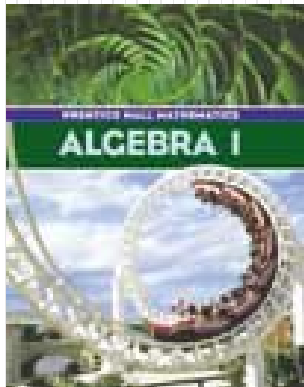
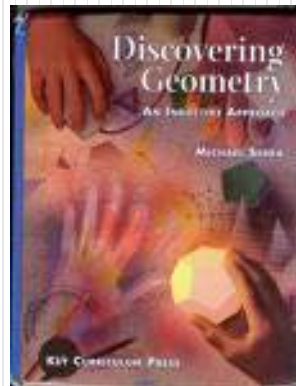


Mr. Northcutt's Math Classes Class Presentation

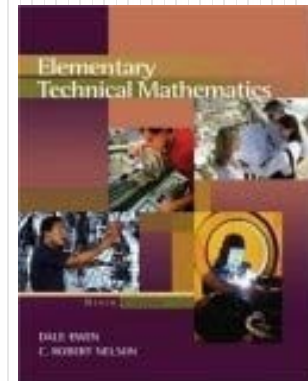
April 27, 2009 (146)



Math 1



Math 2



Applied Math



Math 1 – Daily Summary

- **Announcements**

- **QUIZ: Sections 10-1 thru 10-3 on Thursday**

- **Class Objectives – What you should learn today?**

- Graphing Quadratic Equations with a, b, and c non-zero.
 - Standard Form of Quadratic Function
 - Shape = “Pa-rab-o-la”
 - Axis of Symmetry (x=?), Vertex (x,y), Minimum/Maximum

- **Assignment**

- **Section 10-2: 2-22 EVEN**

$$y = ax^2 + bx + c$$

$$x = \frac{-b}{2a}$$

Standard Form - Impact of Coefficients



- **What impact do a, b, and c have on function?**

$$y = ax^2 + bx + c$$

- Open up/down
- Width of parabola
- Shift up/down
- Move left/right and up/down



Graphing Quadratic Function

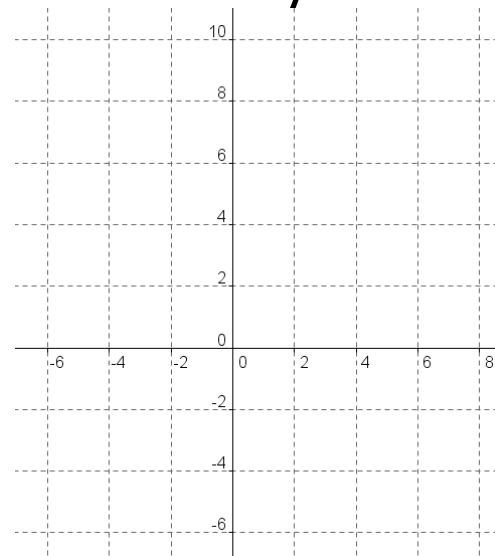
- **Suggested steps for graphing a Quadratic Function are:**

1. Find equation of Axis of Symmetry ($\frac{-b}{2a}$) and y-coordinate of Vertex.

2. Find two (2) other points on the graph. $y = ax^2 + bx + c$
 - Suggest using y-intercept, and
 - Another point on same side of axis of symmetry.

3. Reflect the 2 points across the axis of symmetry.

$$y = -3x^2 + 6x + 5$$

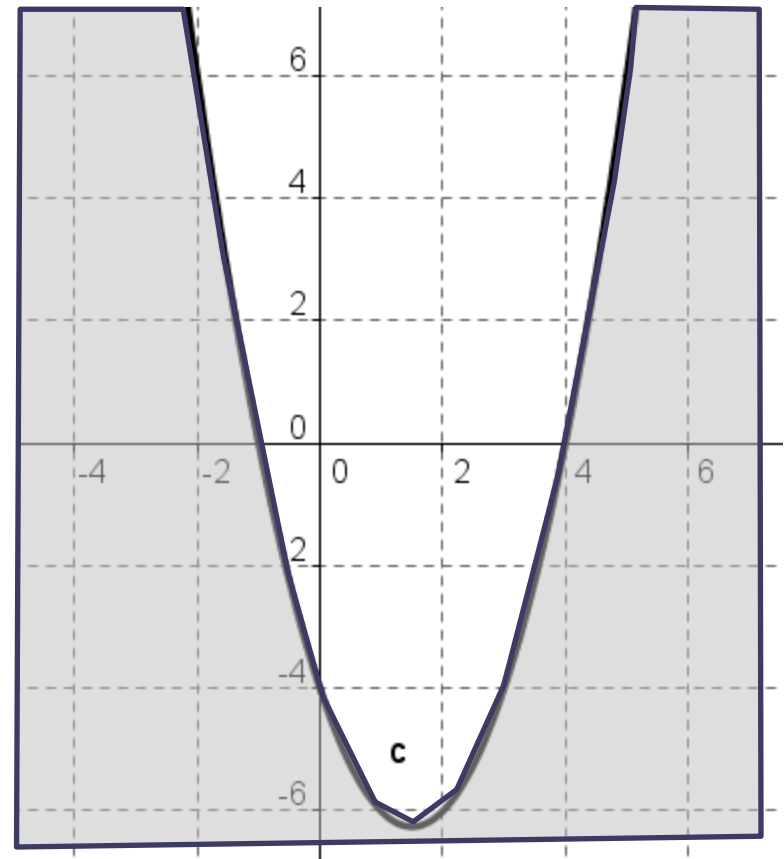


Graphing Quadratic Inequalities



- **Just Like Linear Inequalities...**

$$y \leq x^2 - 3x - 4$$





Math 2 – Daily Summary

- **Announcements**

- **TEST: Chapter 12 (Similarity) on Thursday**

- **Class Objectives – What you should learn today?**

- Understand Relationship between Corresponding Parts of Similar Triangles
 - Altitudes, Medians, and Angle Bisectors
- Understand Ratio in which an Angle Bisector in a Triangle divides the angle's opposite side.

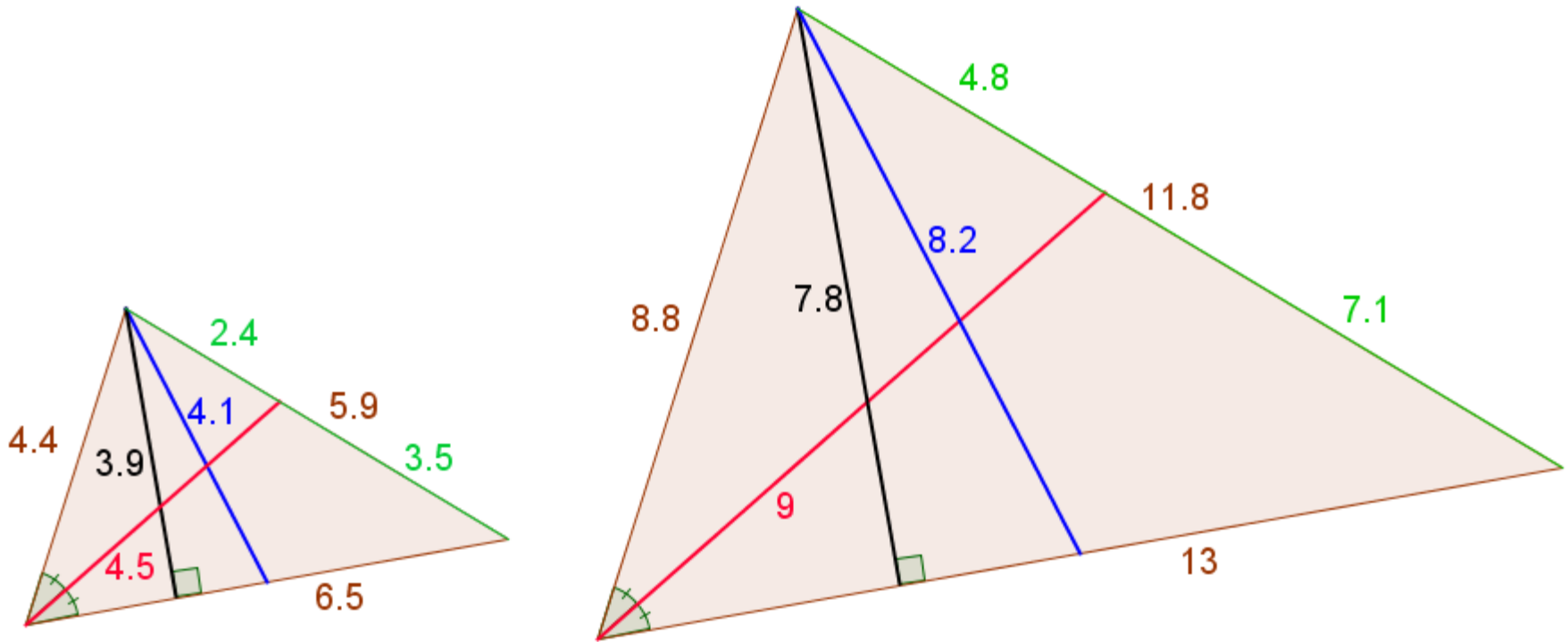
- **Assignment**

- **Lesson 12.5: 1-13**



Parts of Similar Triangle

- The two triangles are similar (scaled by 2)



Corresponding Parts Conjecture



- **Proportional Parts Conjecture**

- If two triangles are similar, then the corresponding altitudes, corresponding medians, and corresponding angle bisectors are proportional to the corresponding sides.

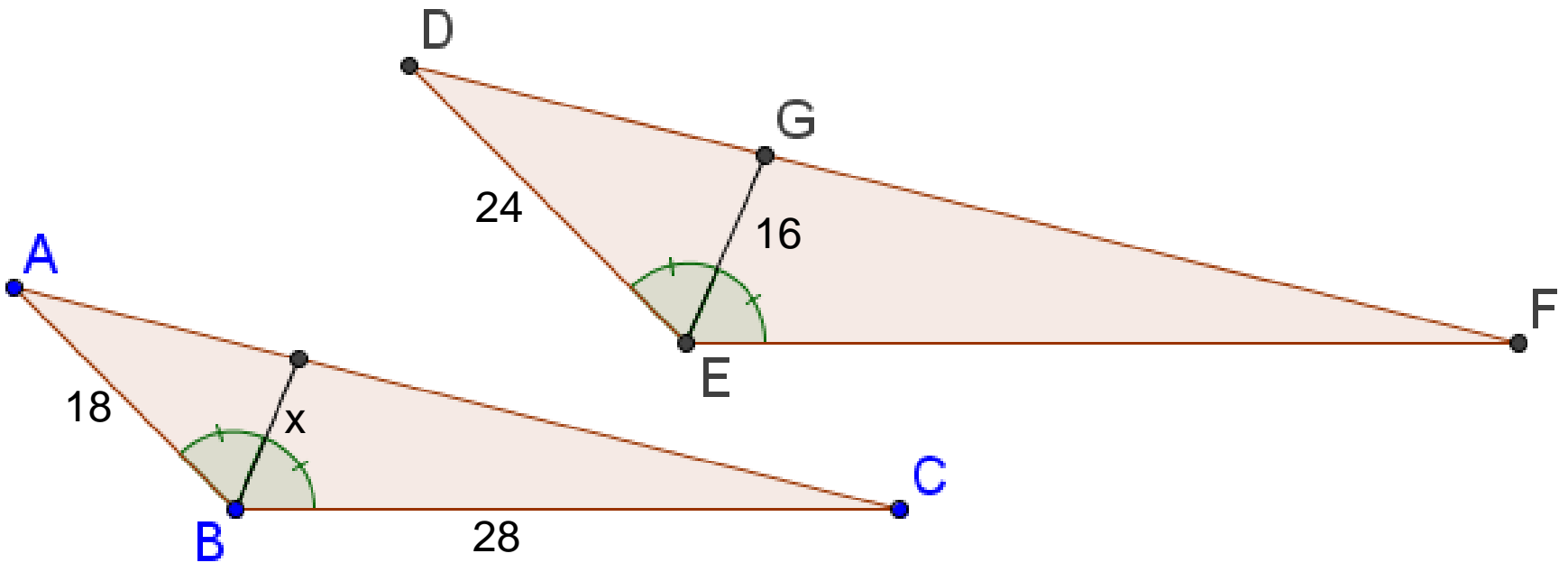
- **Angle Bisector Proportionality Conjecture**

- The angle bisector in a triangle divides the opposite side into two segments whose lengths are in the same ratio as the lengths of the two sides forming the angle.



Example

- Find x .





Applied Math – Daily Summary

- **Announcements**

- None

- **Class Objectives – What you should learn today!**

- **Statistical Measurements**

- Mean (“average”)
- Median (“middle”)
- Mode (“most frequent”)
- Percentiles (0% to 100%)

- **Assignment**

- **Section 15.5-6: MS Excel: Mean, Median, Mode & Percentile**



Statistical Measurement (some)

- **Mean**

- Average of the set of measurements. $Mean = \frac{\sum measurements}{\#measurements}$
 $\{1,2,3,4,5,6,7,8,9,10\}$ **Mean = 5.5**

- **Median**

- Middle value when ranged in order of size...mean of middle 2 terms if even number of terms.

1
2
4
4
5
6
7
8
9

Median = 5

- **Mode**

- The measurement that appear most often in the set (may be multiple values).

Mode = 4



Percentile

- **Percentiles are numbers that divide a given set of data into 100 equal parts. The n^{th} percentile is the number P_n such that n percent of the data is at or below P_n .**

See Example in Excel.