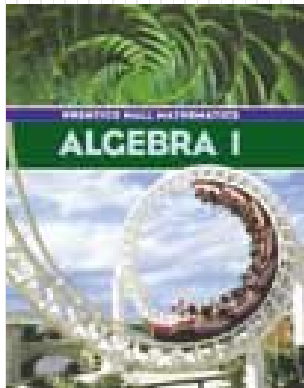
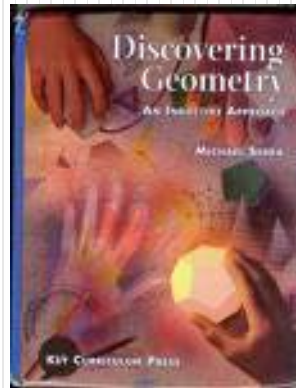


# Mr. Northcutt's Math Classes Class Presentation

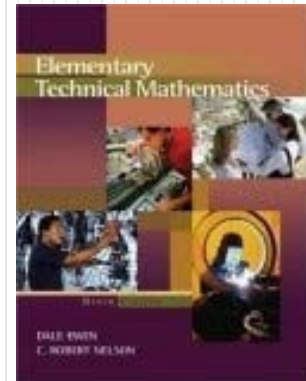
February 26, 2009 (109)



Math 1



Math 2



Applied Math



# Math 1 – Daily Summary

- **Announcements**
  - **QUIZ: Sections 6.1 thru 6.3 Tomorrow**
- **Class Objectives – *What you should learn today!***
  - Work with equations of lines in either form:
    - Slope-Intercept
    - Standard Form
- **Assignment**
  - **Worksheet: Equations of Lines**

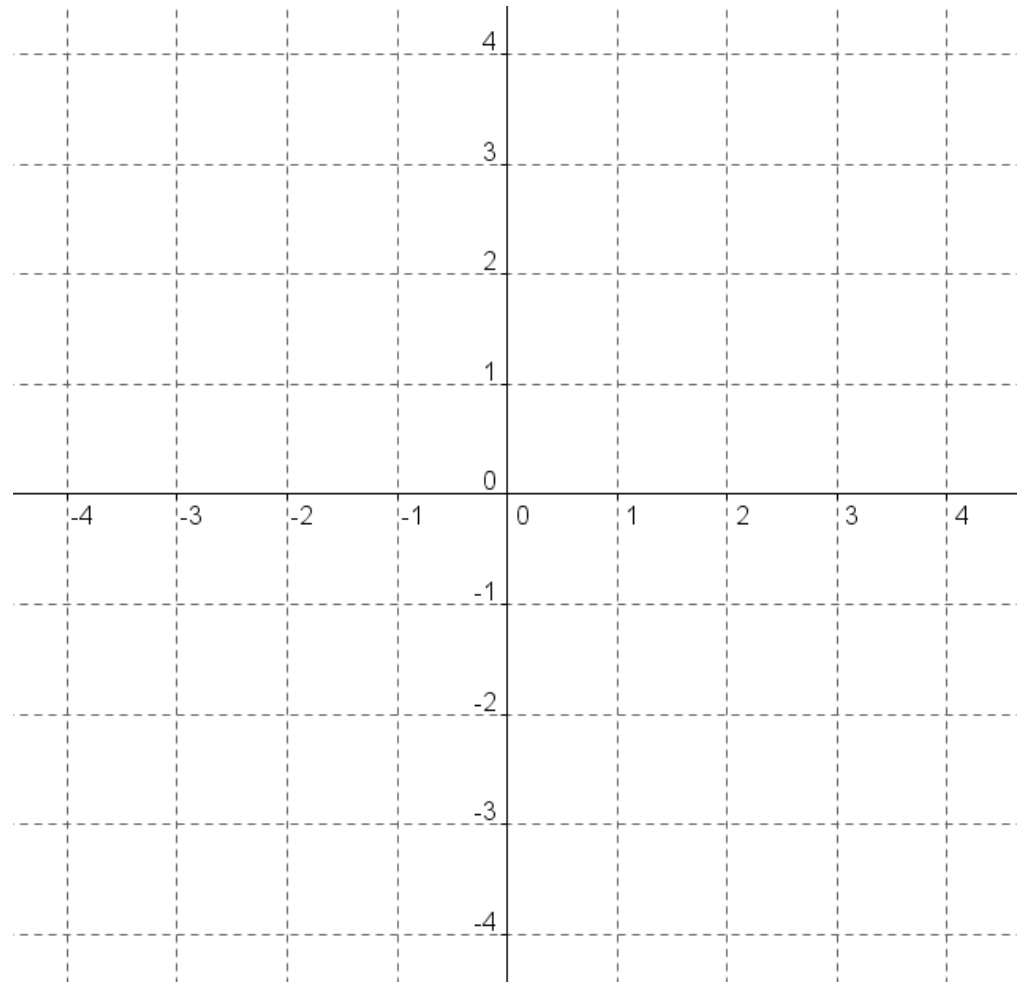
# Slope-Intercept Form $y = mx + b$



- Identify **Slope (m)** and **y-intercept (b)**, then graph.

$$y = -\frac{2}{3}x - 1$$

$$2x + 3y = 6$$





# Standard Form

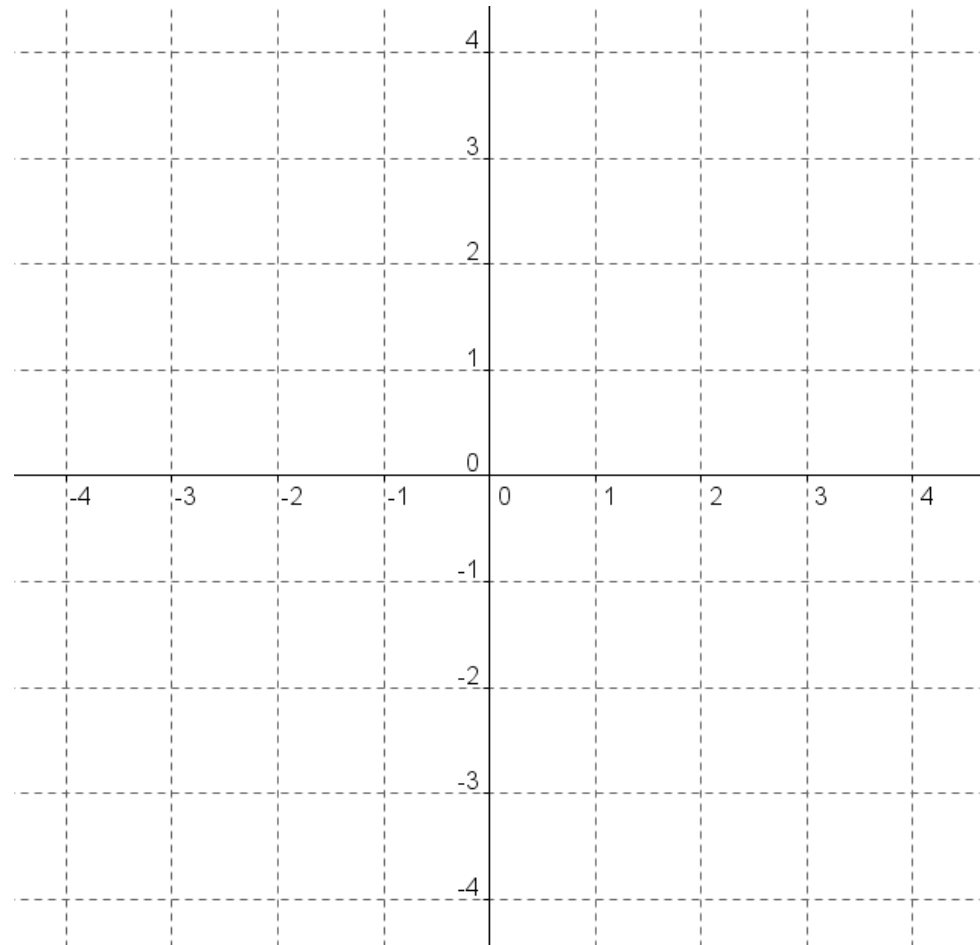
- The **Standard Form** of a Linear Equation is:

$$Ax + By = C$$

- **Examples:**

$$3x + 4y = 8$$

$$2x - 3y = 12$$



**GRAPH USING:**

1. Slope-Intercept Form
2. x- & y-intercepts



# Math 2 – Daily Summary

- **Announcements**
  - **QUIZ: Lessons 10.1 thru 10.7 Tomorrow**
- **Class Objectives – *What you should learn today!***
  - Ability to use the Distance Formula (Pythagorean Theorem) and Equation of a Circle in problems.
- **Assignment**
  - **Lesson 10.7:1-13**



# Solutions: 10.6

**1:** 24 ft<sup>2</sup>

**2:** 4.9 m

**3:** 20 in

**4:** 50 km/hr

**5:** 10 m

**6:**  $30\sqrt{2}$  in

**7:** 8 ft

**8:** 60 m<sup>2</sup>; \$7200

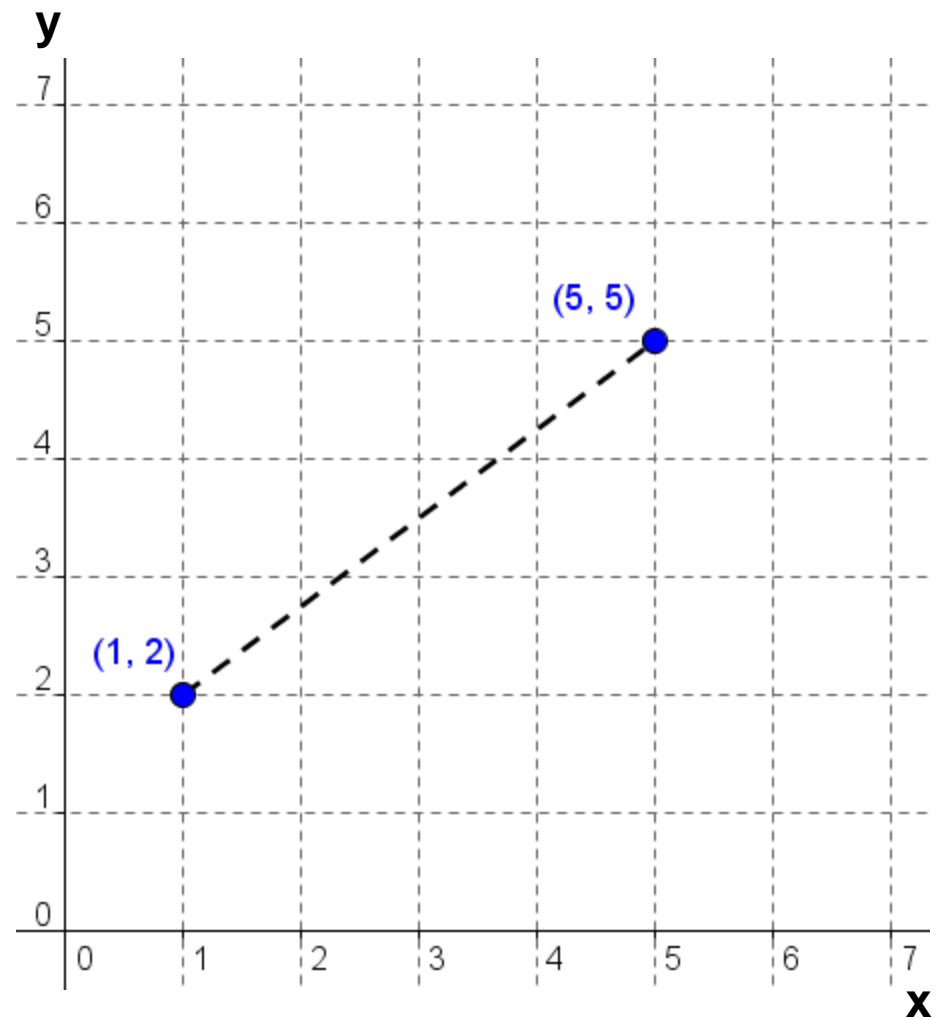
**16:** Leg is longer than hypotenuse.

**17:** Isosceles right triangle, hypotenuse should be  $4\sqrt{2}$



# Distance Between Points

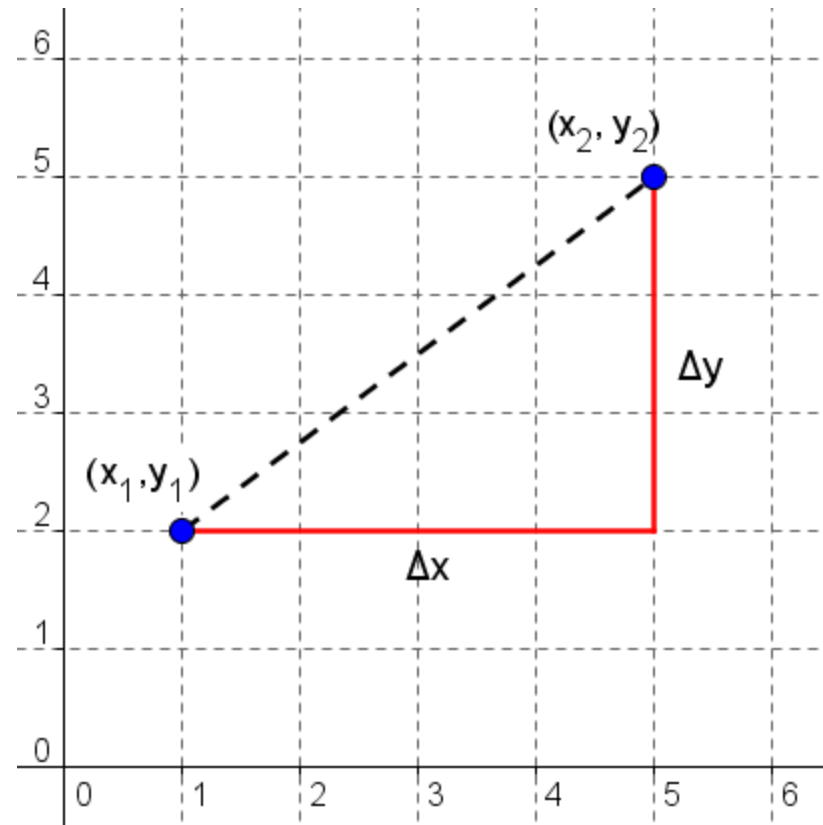
- How might you find the distance between the 2 points?





# Distance Between Points

- Can you create an expression for the distance between any 2 points:  $(x_1, y_1)$  and  $(x_2, y_2)$ ?



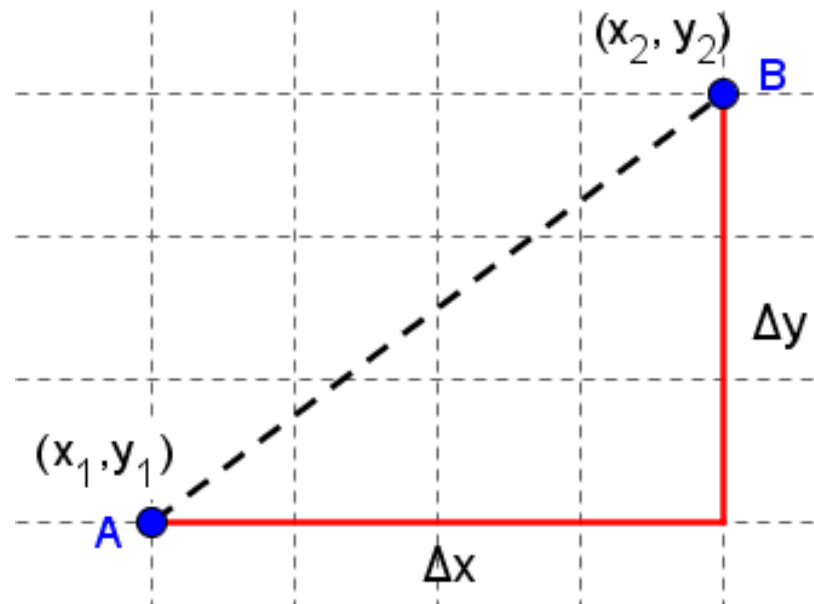




# Distance Formula

- If the coordinates of points A and B are  $(x_1, y_1)$  and  $(x_2, y_2)$ , respectively, then:

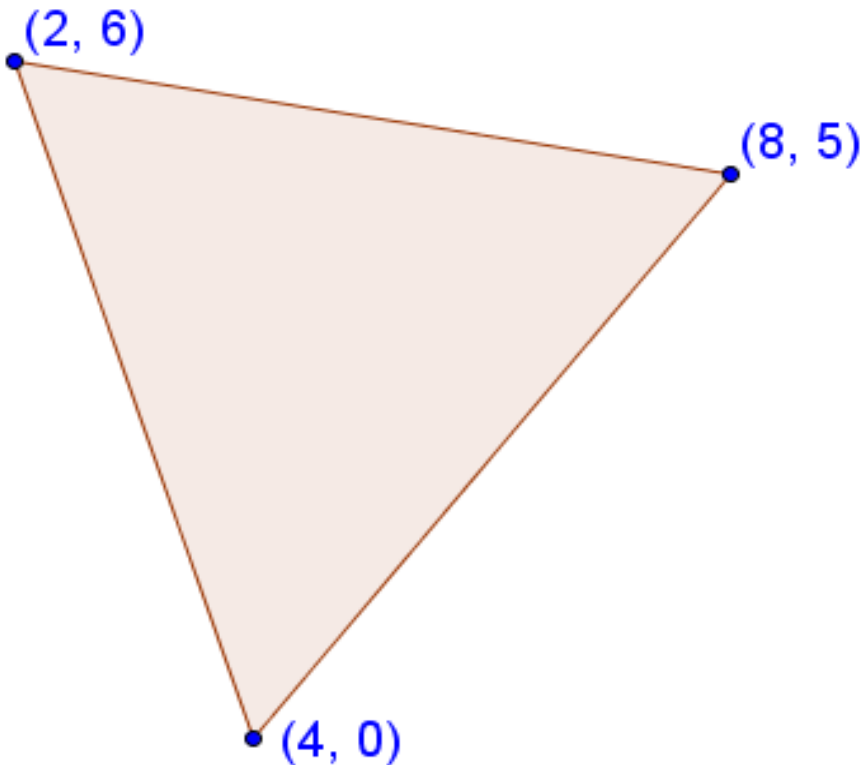
$$AB = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$





# Example

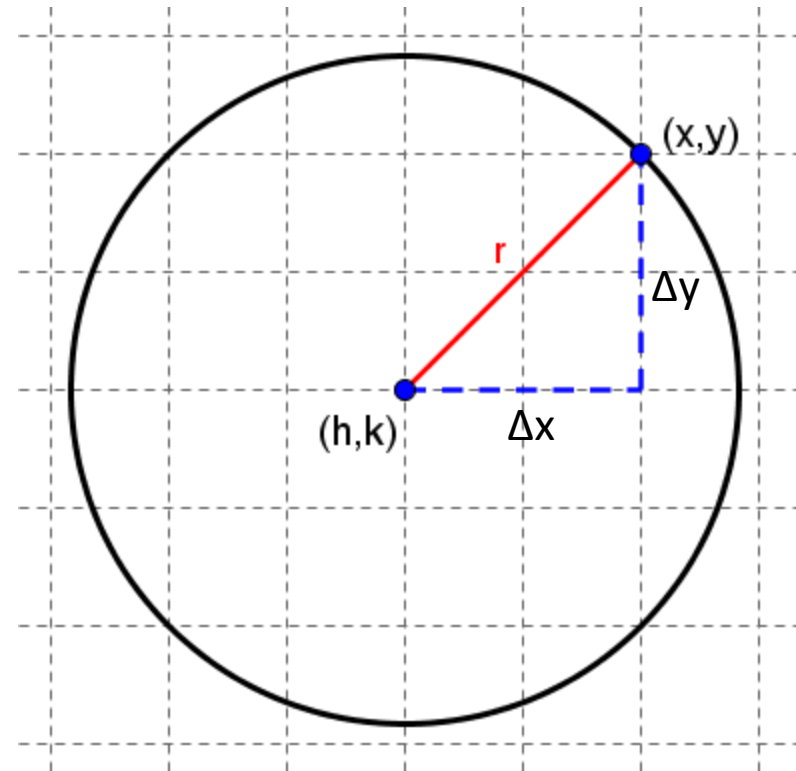
- Is the following triangle scalene, isosceles or equilateral?





# Equation of a Circle

- Use the Distance Formula to calculate the distance between the point  $(h,k)$ , center of the circle and the point  $(x,y)$ , on the circle.

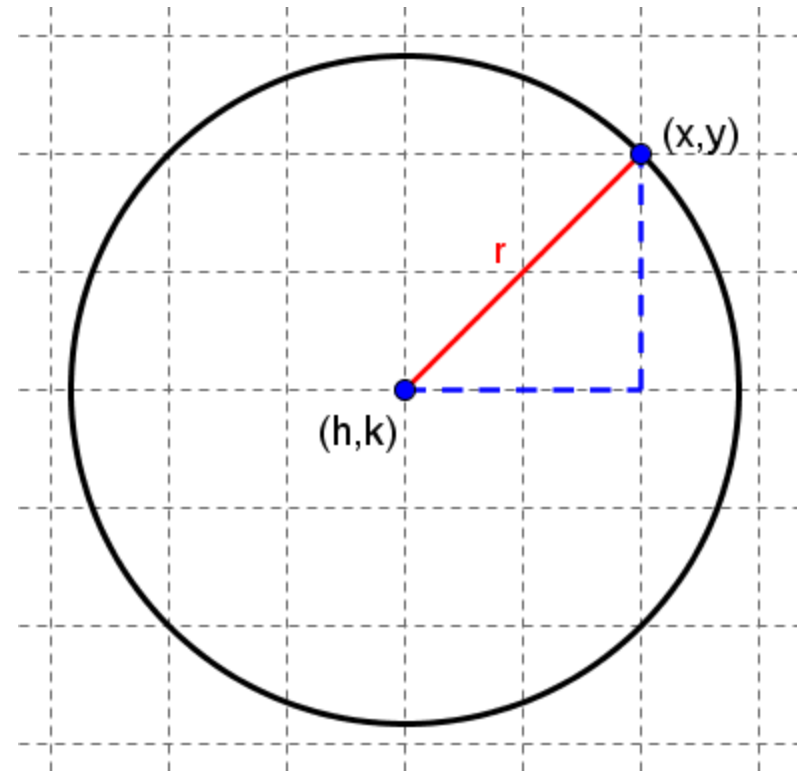




# Equation of a Circle

- The equation for a circle with radius  $r$  and center  $(h, k)$  is:

$$(x - h)^2 + (y - k)^2 = r^2$$



# Applied Math – Daily Summary



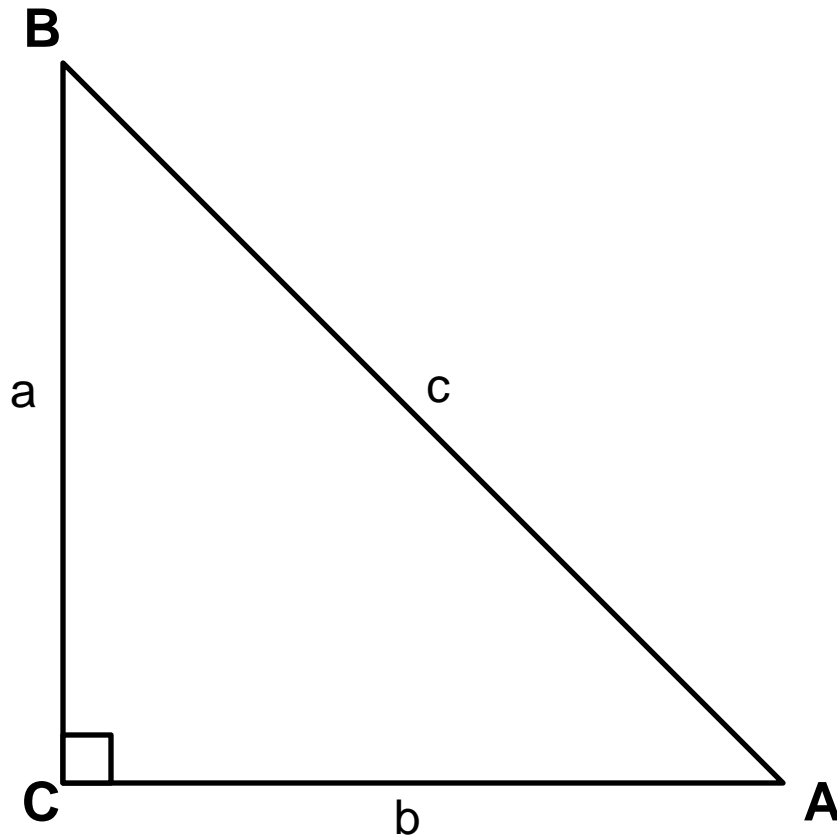
- **Announcements**
  - **QUIZ: Sections 13.1 thru 13.3 Tomorrow**
- **Class Objectives – *What you should learn today!***
  - Use Trigonometric Ratios to find the side lengths and missing angles of Right Triangles.
- **Assignment**
  - **Exercises 13.4: 2-24 EVEN (all answers to 3 significant digits)**



# Find ALL Angles & Side Lengths

- $\angle A = 50.6^\circ$ ,  $c = 49.0$  cm

Discuss Side-to-Angle  
Naming Convention!



# Trigonometric Ratios (Right Triangles)



- Sine, Cosine & Tangent of an angle.

$$\sin \angle x = \frac{\textit{Opposite}}{\textit{Hypotenuse}}$$

$$\cos \angle x = \frac{\textit{Adjacent}}{\textit{Hypotenuse}}$$

$$\tan \angle x = \frac{\textit{Opposite}}{\textit{Adjacent}}$$

S  
O  
H  
-  
C  
A  
H  
-  
T  
O  
A

