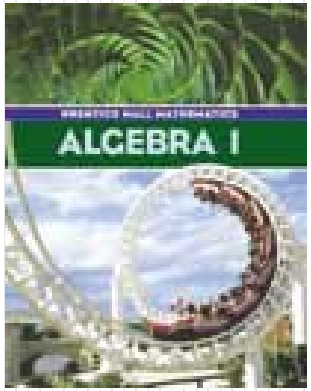
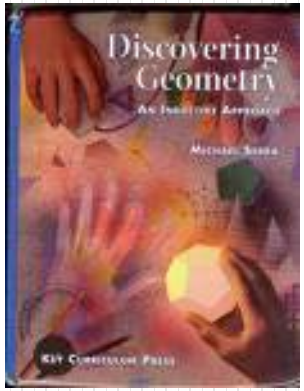
Mr. Northcutt's Math Classes
Class Presentation

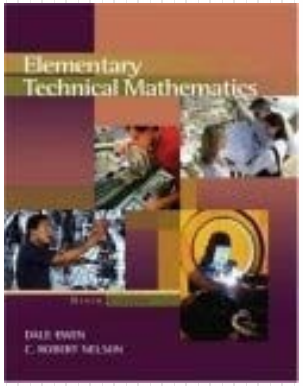
January 6, 2009 (76)



Math 1



Math 2



Applied Math

Math 1 – Daily Summary

- **Announcements**
  - Quiz on Sections 9-1 thru 9-4 on Friday
  - End of Semester on 1/23 – Semester Final (grade < B-)
- **Class Objectives – What Should You Learn?**
  - HW Check and Questions
  - Multiply by and Factor a Monomial from a Polynomial
    - Multiplying a Polynomial by a Monomial (Distributive Property)
    - Factoring a Monomial from a Polynomial (Common Factors)
- **Assignment**
  - **Section 9-2**: 1-24 ALL, 26

Review – Naming Polynomials

- **Name each polynomial by <u># of terms</u> and <u>degree</u>.**

$$2x + 4$$

$$2x^3y - 4x^2 + 2$$

$$-4x^2 + 2$$

$$2x^2 - x^2y^0 - 7x + 5$$

Review – "Standard Form"

- **Write each polynomial in Standard Form.**

$$-4x + 2x + 4$$

$$4x^2 - 2x + 3x^3 - 2$$

$$8 + 3yx^2 - 2xy + 3$$

$$-2x^2 + 3x - 1$$

Review – Add/Subtract Polynomials

- **Perform indicated operation (+/-).**

$$(2x^2 - 3x + 4) + (3x^2 - 2)$$

$$(x^3 - 3x^2 + 4) - (3x - 2)$$

Refresher – Distributive Property

- **Distributive Property (of Multiplication over Addition)**

$$a \cdot (b + c) = ab + ac$$

$$4 \cdot (x + 3) =$$

$$-2 \cdot (x^2 + 3x - 1) =$$

Multiplying with Monomials

- **Distributive Property works same way for Polynomials!**

$$a \cdot (b + c) = ab + ac$$

$$4b(b^2 - 2b + 3)$$

$$2x^2(x^2 - 3x + 2)$$

"Factoring Out" a Monomials

- **Distributive Property works in the <u>opposite direction</u> too!**

$$ab + ac = a \cdot (b + c)$$

Look for **<u>Common Factors</u>** in both:

1. Numeric Coefficient
2. Variables

$$3x^3 - 12x^2 + 15x$$

Find Greatest Common Factor:

$$3x^3 = 3 \cdot x \cdot x \cdot x$$
$$12x^2 = 2 \cdot 2 \cdot 3 \cdot x \cdot x$$
$$15x = 3 \cdot 5 \cdot x$$

Factor Out GCF:

$$3x(x^2 - 4x + 5)$$

Signs same as original expression

Practice Factoring

- **Factor Out Common Term from Polynomial**

$$8x^2 - 12x$$

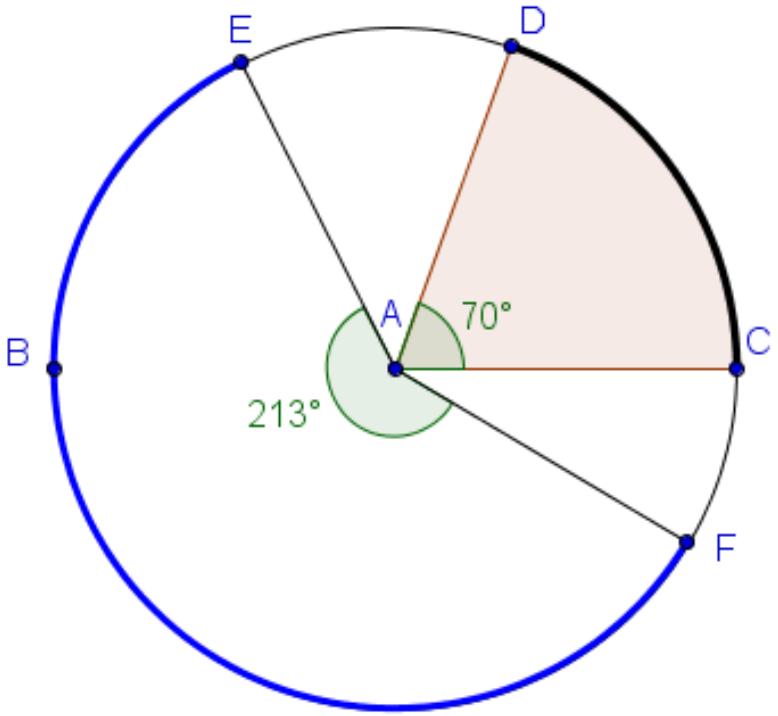
$$6m^3 - 12m^2 - 24m$$

Math 2 – Daily Summary

- **Announcements**
  - Quiz on Lessons 7.1-3 on Friday
  - End of Semester on 1/23 – Semester Final (grade < B-)
- **Class Objectives – *What Should You Learn?***
  - Arc Measurement
  - Properties of Chords
    - Congruence of Chords, Central Angles and Intercepted Arcs
    - Perpendiculars from Center of Circle to a Chord
    - Distance of Chords from Center of a Circle
    - Perpendicular Bisectors of a Chord
- **Assignment**
  - **Lesson 7.2**: 1-6, 10-13, 19-20

Arc Measurement

- **Arc Measurement**
  - The measure of an arc is defined as the measure of the central angle that intercepts the arc.



$$m\overset{\frown}{CD} = 70°$$

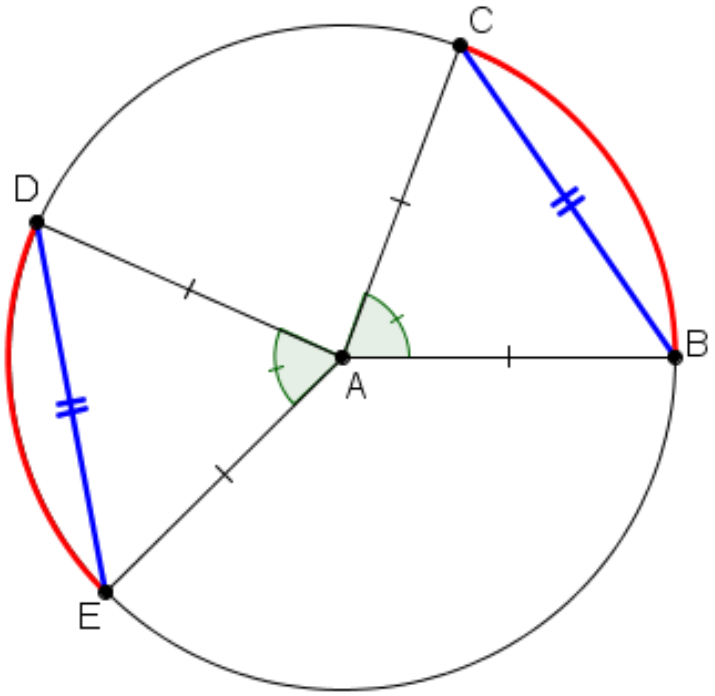
$$m\overset{\frown}{EBF} = 213°$$

Congruent Chords

- **#1: If two chords in a circle are congruent, then they determine two central angles that are congruent.**

  from the definition of arc length it follows that:

- **#2: If two chords in a circle are congruent, then their intercepted arcs are congruent.**

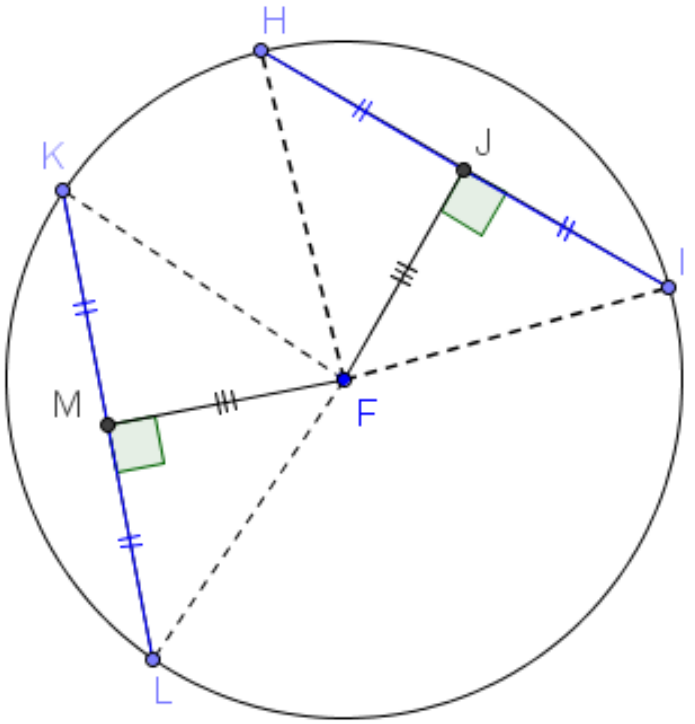


How would you **PROVE** these are true?

Perpendicular Bisectors of Chords

- **#1: The perpendicular from the center of a circle to a chord is the perpendicular bisector of the chord.**

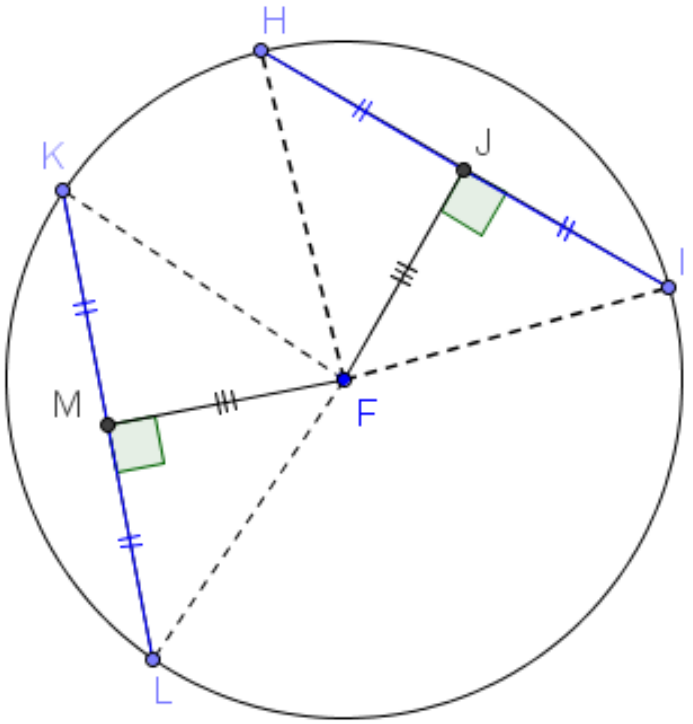
- **#2: Two congruent chords in a a circle are equidistant from the center of the circle.**



How would you **PROVE** these are true?

Perpendicular Bisectors of Chords

- **#3: The perpendicular bisector of a chord contains the center of a circle.**



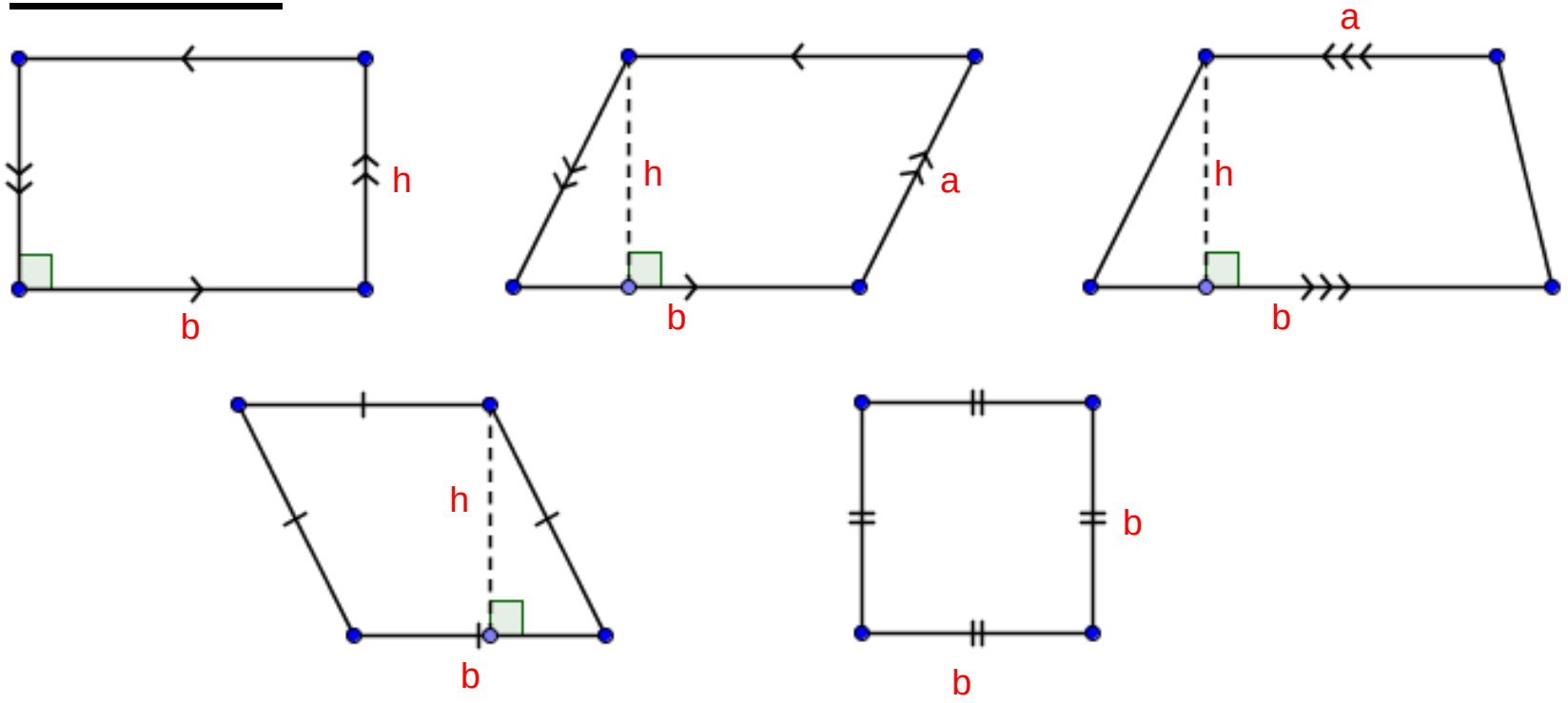
How would you **PROVE** this is true?

Applied Math – Daily Summary

- **Announcements**
  - Quiz on Sections 12.1 thru 12.4 on Friday
  - End of Semester on 1/23 – Semester Final (grade < B-)
- **Class Objectives – *What Should You Learn?***
  - Properties of Quadrilaterals
    - Identify Types of Quadrilaterals:
      - Parallelogram, Rectangle, Square, Rhombus & Trapezoid
    - Calculate Area and Perimeter of Quadrilaterals
- **Assignment**
  - **Section 12.2**: 6, 8, 10, 14, 23, 24, 31, 42

Quadrilaterals

- **Identify Figure and Define Formulas for <u>Area</u> & <u>Perimeter</u>**



Parallelogram, Rectangle, Rhombus, Square, Trapezoid?