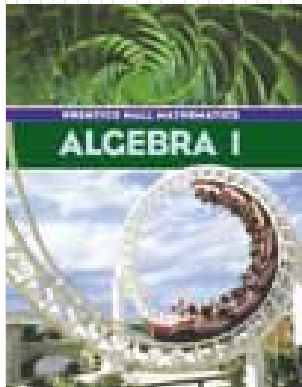




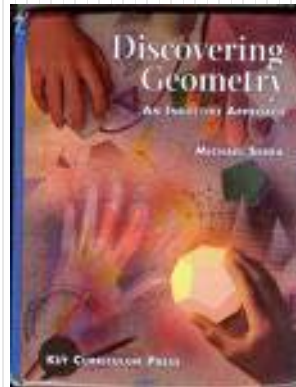
# Mr. Northcutt's Math Classes Class Presentation



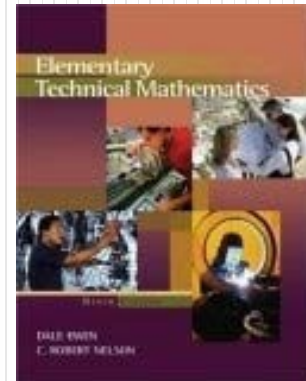
December 10, 2008 (65)



Math 1



Math 2



Applied Math



# Math 1 – Daily Summary

- **Announcements**

- **TEST: Sections 8-1 thru 8-5 MONDAY!**
  - Sample Test & Key on Friday

- **Class Objectives**

- More Exponent Multiplication
  - Raising a Product to a Power
- HW Check (8-3, 8-4(1), and any Past Due)

- **Assignment**

- **Lesson 8-4: 9-41 ODD, 42-50, 52-55, 60, 61**



# Review

- **Simplify the following:**

$$(d^3)^5 (d^3)^0$$

$$(c^{-2})^3 c^{-12}$$

$$(7a^2)^2$$

# Exponent Rules (Just Multiplication!)



$$x^n = \underbrace{x \cdot x \cdot x \dots \cdot x}_{n \text{ times}}$$

Definition of Powers (Exponents)

$$x^a \cdot x^b = x^{a+b}$$

Multiplication of Powers

$$(x^a)^b = x^{a \cdot b}$$

Power to a Powers

$$(xy)^a = x^a y^a$$

Product to a Powers



# Examples

- Write each expression with only **1 exponent**.

$$a^4 b^4$$

$$\frac{36x^2}{4y^4}$$



# Math 2 – Daily Summary

- **Announcements**

- **QUIZ: Lessons 6-1 thru 6-3 on FRIDAY!**

- **Class Objectives**

- Properties of Polygons: Sum of Exterior Angles

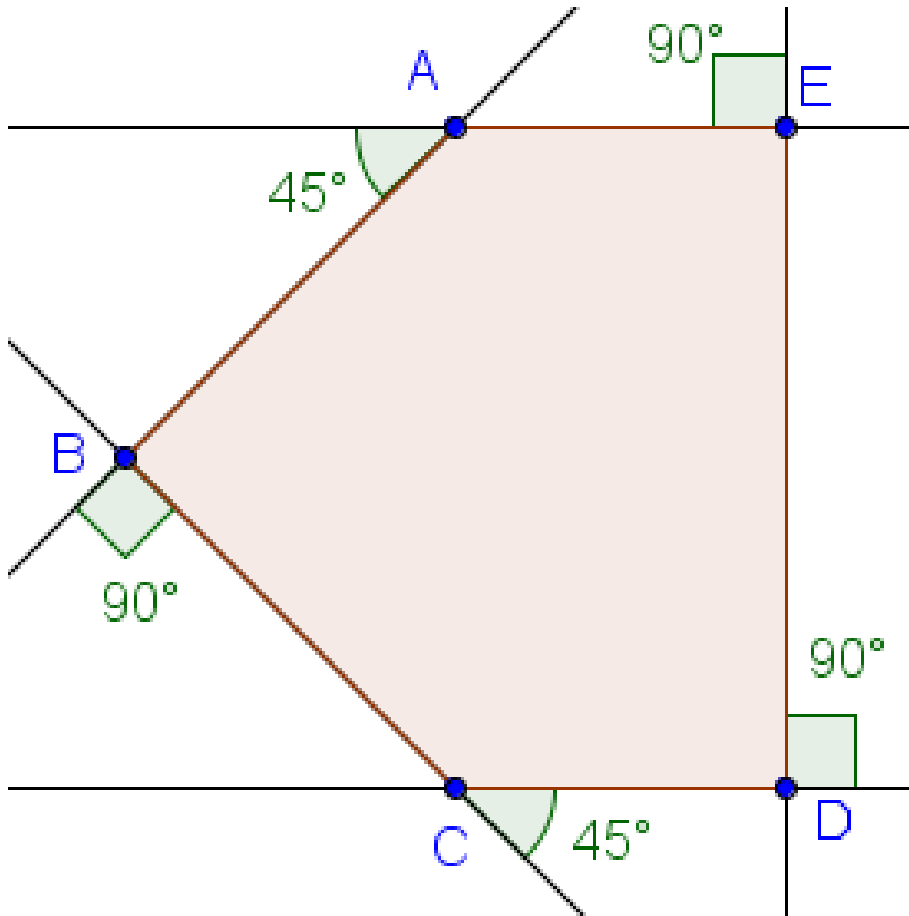
- **Assignment**

- **Lesson 6.2: 1-16, 18, 22, 23**



# Polygon Exterior Angles

- Each polygon has 2 Sets of Exterior Angles

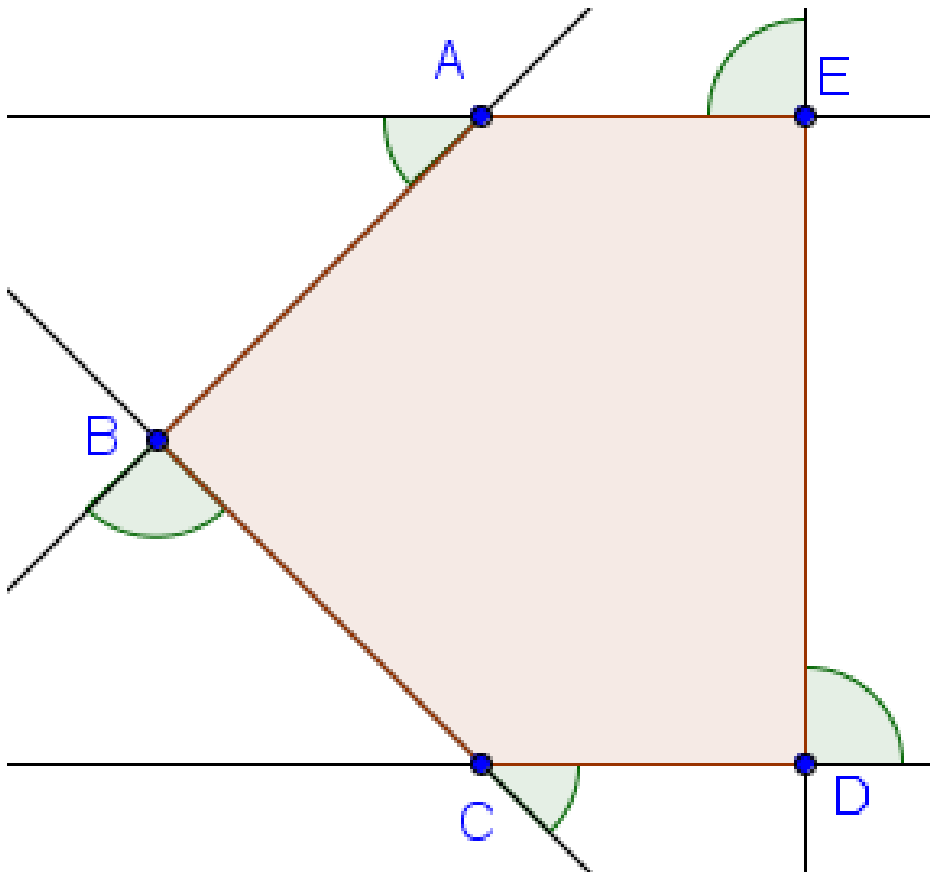


- One side of an exterior angle is a side of the polygon.
- The other side of the angle is the extension of the adjacent side at the same vertex.
- Each vertex has 2 exterior angles. These 2 angles must be congruent. WHY?



# Polygon Exterior Angles

- **Let's look more closely.**



Look at the following at each vertex:

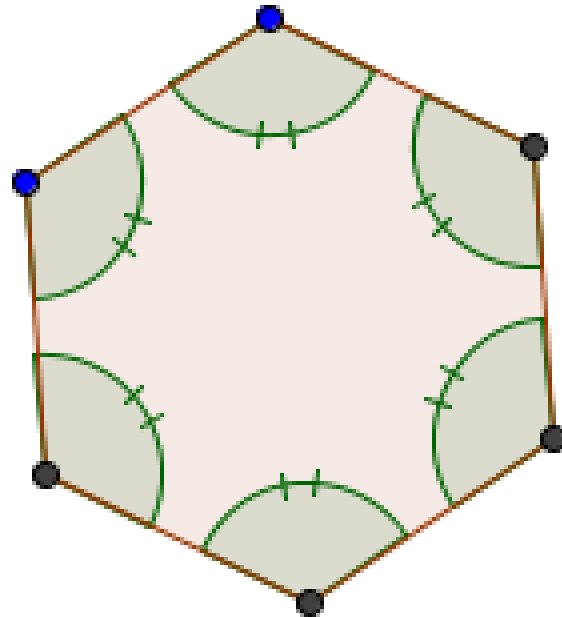
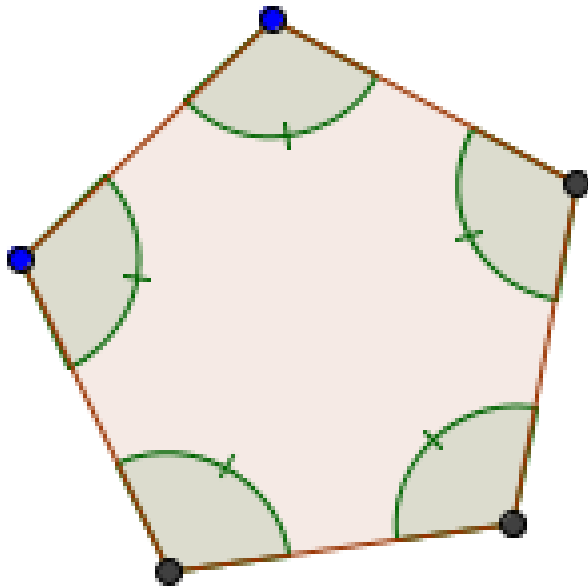
- Interior Angle
- Exterior Angles
- Linear Pairs
- Do you see any relationships when you look at all the vertices of the polygon?
- Could you calculate the sum of the exterior angles for the polygon?
- Could you do it for any Polygon?
- How would you start?





# Equiangular Polygons

- Can you calculate the measure of each angle?



# Polygon Exterior Angle Conjectures



- **Exterior Angle Sum Conjecture**

- The sum of the measures of one set of exterior angles of a polygon is **360°**.

- **Equiangular Polygon Conjecture**

- The measure of each angle of an equiangular n-gon can be found by using either of the following expressions:

$$\frac{(n - 2)180}{n}$$

Interior Angle  
Perspective

$$180 - \frac{360}{n}$$

Exterior Angle  
Perspective



# Applied Math – Daily Summary

- **Announcements**

- **Test: Chapter 7 – Ratio & Proportion on Monday**
- **Next Week: Project - Scale Drawings (Pick a Subject)**

- **Class Objectives**

- **Definitions:** Proportion, Means, Extremes
- Cross-Multiplication to Solve Equations with Proportions – integers, decimals and fractions
- Balancing Units in Proportions
- Solving Percentage Problems using Proportions

- **Assignment**

- **Lesson 7.2:** 2-42 by 3, 44, 46, 52, 62, 66



# Proportions, Means & Extremes

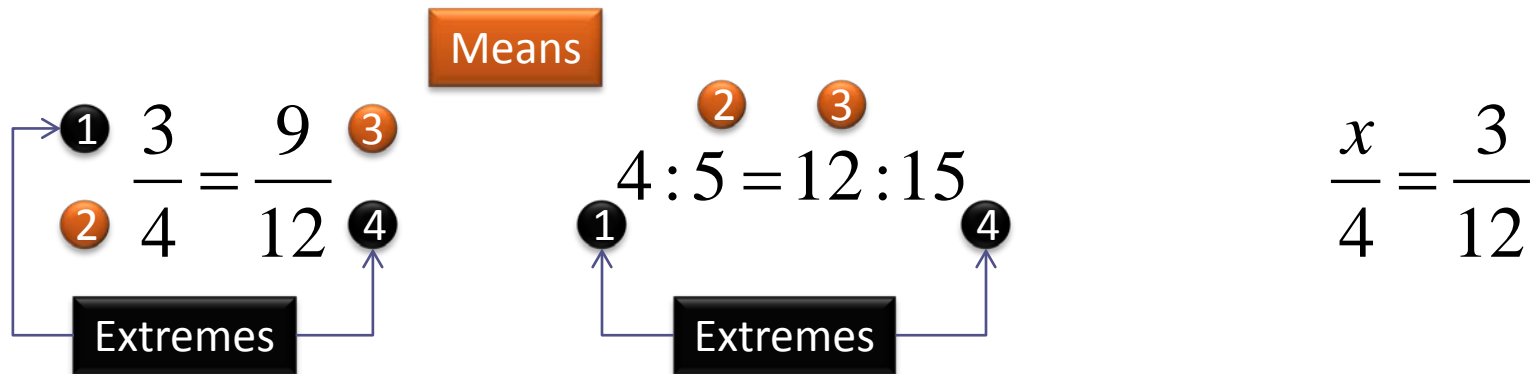
- A Proportion states that two ratios (or rates) are equal.

$$\frac{3}{4} = \frac{9}{12}$$

$$4:5 = 12:15$$

$$\frac{x}{4} = \frac{3}{12}$$

- A proportion has 4 Numbered Terms (1, 2, 3, 4). 1 & 4 are the Extremes, 2 & 3 are the Means.





# Take a Closer Look...

- Can you discover a relationship between the means and the extremes?

$$\frac{3}{4} = \frac{9}{12}$$

$$4:5 = 12:15$$

$$\frac{6}{7} = \frac{18}{21}$$



# So What?

- Can you determine if the two ratios are equal?

$$\frac{11}{34} = \frac{21}{63}$$

- Can you solve an equation?

$$\frac{x}{3} = \frac{6}{18}$$

$$\frac{x+2}{4} = \frac{x-1}{2}$$

$$\frac{3}{x} = \frac{10}{5}$$



# Percentages

- **Percent means “per 100”**

$$\frac{n}{100} = \frac{\textit{part}}{\textit{whole}} = \frac{p}{w}$$

- **A student answers 27 out of 30 questions correctly. What percentage did the student get on the test?**

$$\frac{n}{100} = \frac{\textit{part}}{\textit{whole}} = \frac{27}{30}$$

$$30n = 2700$$

$$n = 90\%$$

# Example: Percentages

$$\frac{n}{100} = \frac{\textit{part}}{\textit{whole}} = \frac{p}{w}$$



- A nurse prepares 300 mL of 10% glucose solution from pure crystalline glucose. How much pure crystalline glucose is needed?
  
- Prepare 2000 mL of a Lysol solution containing 1 part Lysol and 19 parts water from pure Lysol. How much pure Lysol is needed? (**BE CAREFUL ON PART & WHOLE**)