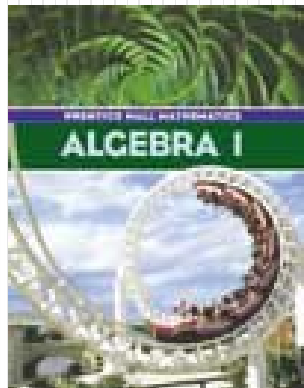




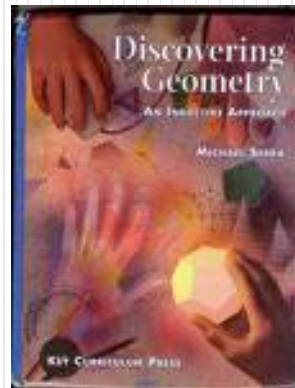
Mr. Northcutt's Math Classes Class Presentation



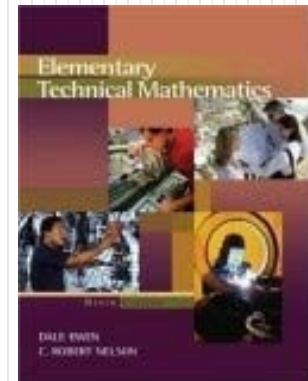
December 11, 2008 (66)



Math 1



Math 2



Applied Math



Math 1 – Daily Summary

- **Announcements**

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

- **Class Objectives**

- Division with Exponents

- **Assignment**

- **Lesson 8-5: 2-36 EVEN, 42-49, 79-82**



Division Properties of Exponents

- **Dividing Powers with the Same Base**

$$\frac{3^7}{3^3}$$

$$\frac{a^m}{a^n} =$$

- **Raising a Quotient to a Power**

$$\left(\frac{2}{3}\right)^3$$

$$\left(\frac{a}{b}\right)^n =$$



A Few Examples...

- **Simplify**

$$\frac{5^9}{5^6}$$

$$\frac{x^9 y^3}{x^9 y^2}$$

$$\frac{6 \times 10^5}{2 \times 10^3}$$

$$\left(\frac{c^5}{c^9} \right)^3$$



Math 2 – Daily Summary

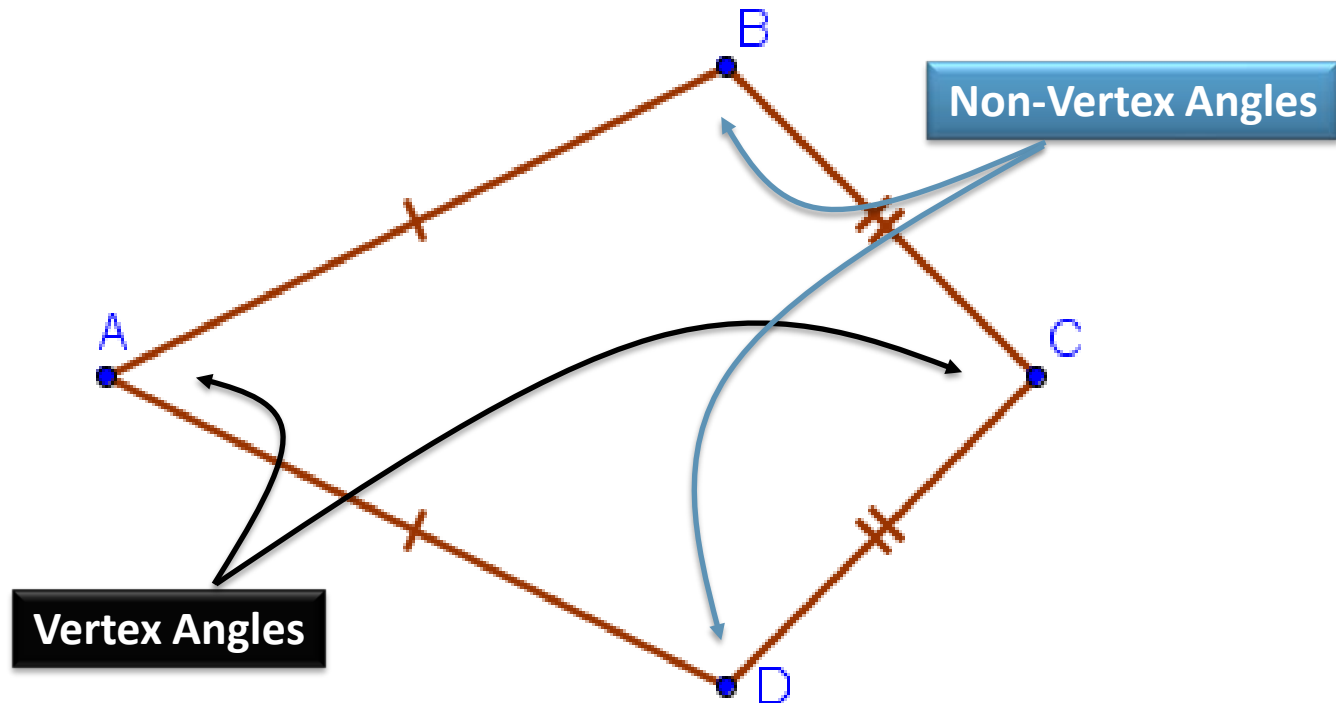
- **Announcements**
 - **QUIZ: Lessons 6-1 thru 6-3 Tomorrow!**
- **Class Objectives**
 - Properties of Kites and Trapezoids
- **Assignment**
 - **Lesson 6.3: 1-8, 18, + Proof of *Kite Angle Bisector Conjecture***



Review: Kite Definition

- **Kite**

- A Quadrilateral with exactly two pairs of distinct, congruent, consecutive sides.





Kite Properties

- **Kite Diagonals Conjecture**

- The diagonals of a kite are perpendicular.

- **Kite Diagonal Bisector Conjecture**

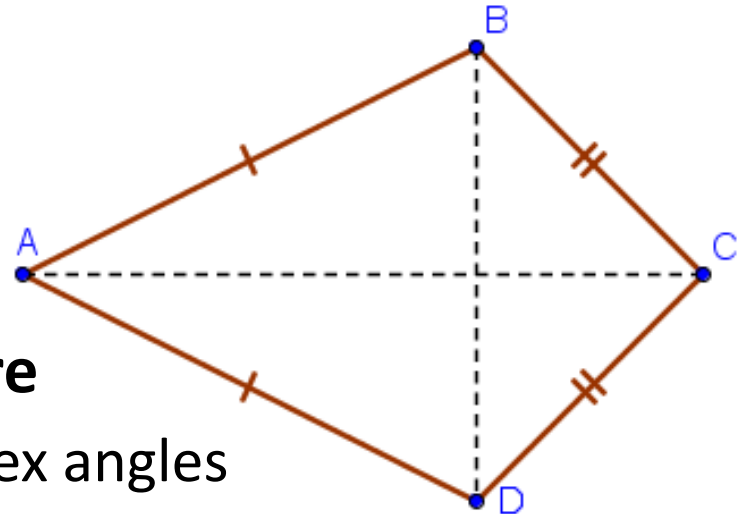
- The diagonal connecting the vertex angles of a kite is the perpendicular bisector of the other diagonal.

- **Kite Angles Conjecture**

- The Non-Vertex angles of a kite are congruent.

- ***Kite Angle Bisector Conjecture**

- The Vertex angles of a kite are bisected by a diagonal.

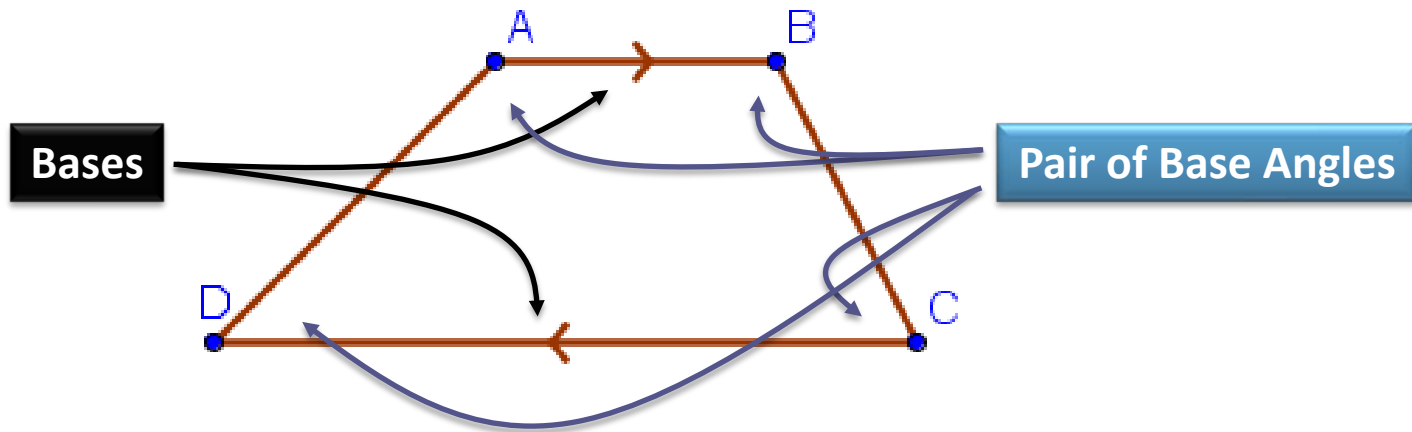




Review: Trapezoid Definition

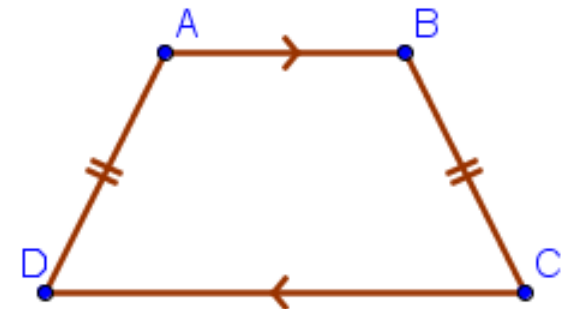
- **Trapezoid**

- A Quadrilateral with exactly one pairs of parallel sides.



- **Isosceles Trapezoid**

- A trapezoid whose two nonparallel sides are the same length.





Trapezoid Properties

- **Trapezoid Consecutive Angles**

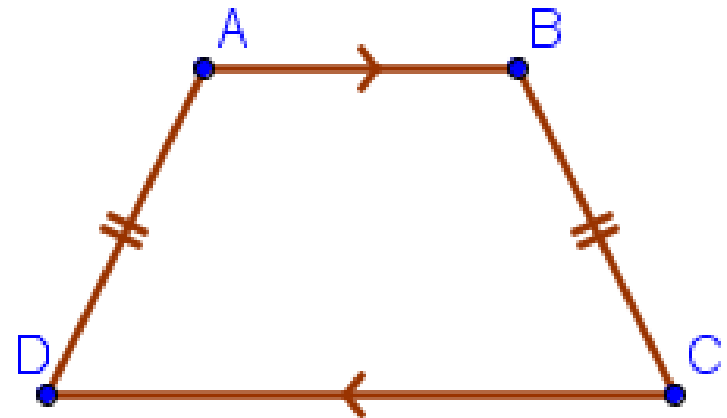
- The consecutive angles between the bases of a trapezoid are supplementary.

- **Isosceles Trapezoid Conjecture**

- The base angles of an isosceles trapezoid are congruent.

- **Isosceles Trapezoid Diagonals Conjecture**

- The diagonals of an isosceles trapezoid are congruent.





Applied Math – Daily Summary

- **Announcements**

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

- **Class Objectives**

- Direct Variation
 - Scale on a Map
 - Scale Drawings

- **Assignment**

- **Lesson 7.3: 11, 16, 17-19, 24, 25, 27, 29, 31**



Direct Variation – Speed/Rate

- When two quantities change in a way such that their ratio is constant they are said to **VARY DIRECTLY**.

- **Example:**

- You drive 35 miles in 1 hour
- You drive 70 miles in 2 hours
- You drive 105 miles in 3 hours

- ...

$$\frac{\text{miles}}{\text{hours}} = \frac{35}{1} = \frac{70}{2} = \frac{105}{3} = 35$$

- In this example the **CONSTANT OF VARIATION** is the **Speed/Rate** you are driving.



Direct Variation - Scale

- **Another example...Maps and Scale Drawings**

- 1 inch represents 25 miles
- 2 inches represent 50 miles
- 3 inches represent 75 miles
- ...

$$\frac{\text{miles}}{\text{inch}} = \frac{25}{1} = \frac{50}{2} = \frac{75}{3} = 25$$

- In this example the **CONSTANT OF VARIATION** is the **Scale** of the map (or drawing).



Example

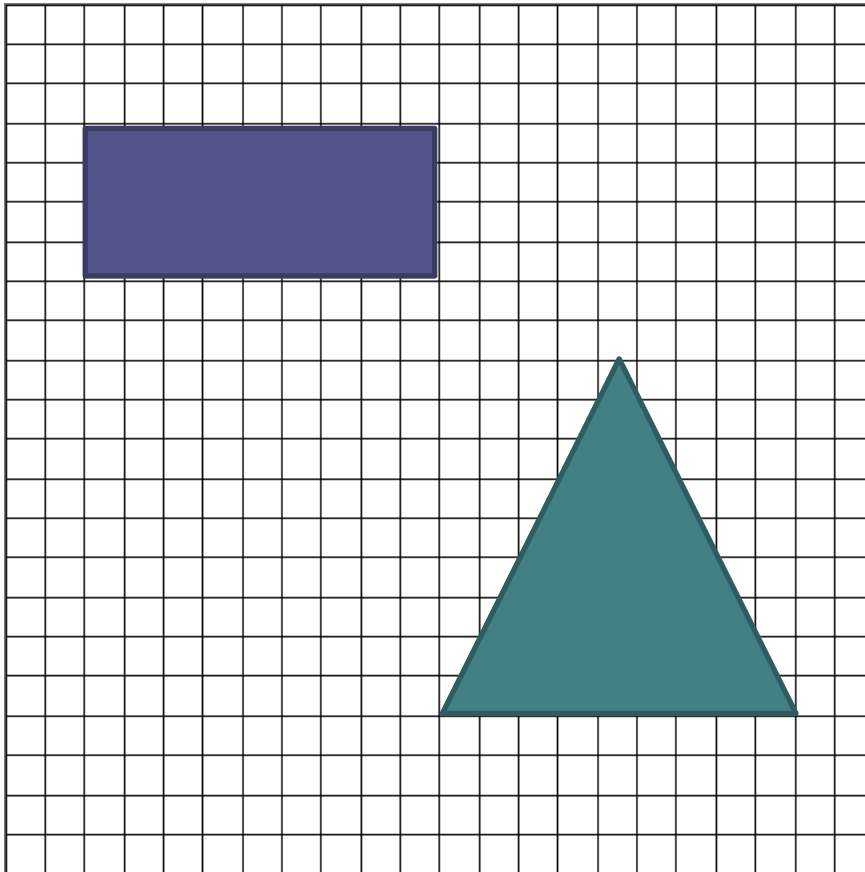
- Approximately how far is it from Toledo, OH to Peoria, IL





Example

- Find the AREA of the rectangle and the triangle.



1 square = 2 in x 2 in