

Trigonometry

Name _____

Week 1: January 30 - February 1, 2013

Mathematical Habits

Habit #5: I can make strategic use of appropriate tools.

Habit #6: I attend to precision.

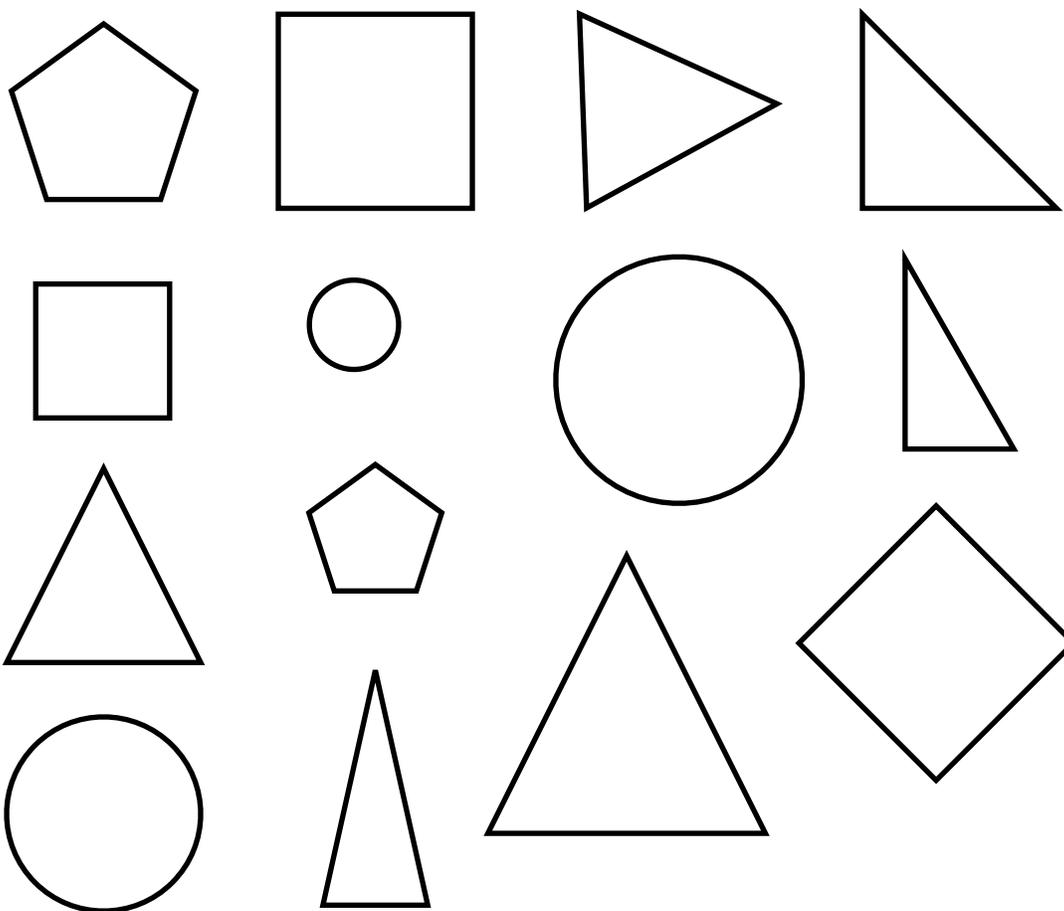
Habit #7: I look for and can make use of structures and patterns.

Unit 1: Triangles

Triangles 1: I can use similarity to define trigonometric ratios as properties of the angles in a triangle.

Key word: ***Similar***

1. Look at the shapes below. How many ***similar*** shapes can you find?



2. What does it mean for two shapes to be similar?

3. Can you name any shapes that are always similar?

4. Do you know any words that have the same definition as similar?

The Similar Triangles Project, Part 1

SLTs: Math Habits #5, #6 & #7, Triangles 1

Look the front of this page to see the Learning Target “Triangles 1.” With this product, we’re going to do exactly what that SLT says. We’re going to use similar triangles to define the trigonometric ratios.

1. The SLT says that trigonometric ratios are **properties** of the angles in a triangle. What does it mean to call one thing a property of something else?

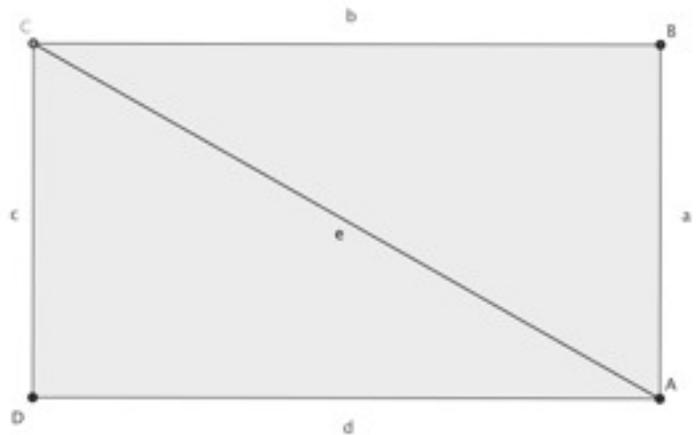
2. Look at the diagram below.
 - a. What are the properties of the shape you see in this diagram?

 - b. How are the vertices labeled in this diagram?

 - c. How are the sides labeled in this diagram?

3. Find $\angle CAD$ (pronounced “angle C A D”).
What is another angle that is congruent to $\angle CAD$?

4. Can you find any other sets of congruent angles?



After you answer these warm-up questions, get rectangular sheet of colored card stock from Mr. Dunseith. Imagine that your rectangle is labeled just like the one on this page, and measure all sides to the nearest tenth of a centimeter. Record your measurements here:

Rectangle ID	Length of a, c	Length of b, d	Length of e	$\frac{a}{e}$	$\frac{b}{e}$	$\frac{a}{b}$

Great - now you're ready for part 2!