




PRE-CALC & TRIG

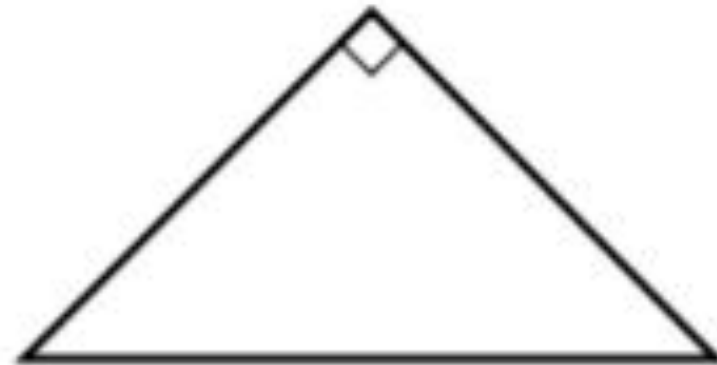
Day 56



Bell Work:

What is the perimeter, in inches, of the isosceles right triangle shown below, whose hypotenuse is $8\sqrt{2}$ inches long?

- A. 8
- B. $8 + 8\sqrt{2}$
- C. $8 + 16\sqrt{2}$
- D. 16
- E. $16 + 8\sqrt{2}$



Individuals will have 5 – 10 minutes to finish test if needed.

Intro to the Bridge Project

Objective

- To build a bridge that covers the required gap, holds the most weight, and follows your groups blueprints and measurements.
- Document your groups process for a summative paper/write up.

Bridge Project

- You'll be in groups of 3 – 4
- This project will involve some research, drafting, constructing, and testing
 - *Pick your groups wisely*

Overview

- You will need blueprints for the side view of your bridge
 - *Include both length measurements, and angle measurements.*
- Additional consideration given if you map out a blue print for the top/bottom and front/back

Bridge Requirements

- The bridge must span a gap of 14 inches (it can be longer if desired)
- The bridge must allow a 'car' with a width of 3 – 4 inches to drive over it
- The bridge must have a hole with a diameter of 0.5 inches in the center to attach the bucket
- Only use the allowed materials (outlined on next slide)

Materials Allowed

- Less than or equal to 200 popsicle sticks
- Less than or equal to 2 rubber bands
- Less than or equal to 4 index cards
- Elmer's Glue (provided)
- Graph Paper for blue prints is encouraged

Schedule

Day 1:

- *Research & Design Bridges. Assign Roles. Get Angle & Side Measurements. Begin Build*

Day 2:

- *Continue Building. Finish Finding Angle and Side Measurements if needed.*

Day 3:

Final Build Day. Finalize builds and mathematics

Day 4:

*Test Bridges.
Finish write-ups*

Grades

■ Formative:

- *Turn in blueprints. Clearly defined roles.
Build completed on time. Appropriate use of
class time.*

■ Summative:

- *Build was true to scale.
Weight supported.
Formal Write – Up*

Formal Write – Up

- Daily Accomplishments/plans stated.
- Clearly defined roles within the group
- Summarize patterns within the length and angles used in building the bridge.
- Defend why you built the bridge the way that you did (cite any sources used to help with research)
- Attach blueprints