




# PRE-CALC & TRIG

Day 58



## Bell Work:

What fraction lies exactly halfway between  $\frac{2}{3}$  and  $\frac{3}{4}$  ?

**F.**  $\frac{3}{5}$

**G.**  $\frac{5}{6}$

**H.**  $\frac{7}{12}$

**J.**  $\frac{9}{16}$

**K.**  $\frac{17}{24}$

# Bell Work Answer

- Use your calculator to add the two fractions and divide the answer by 2.
- The answer is: **K**

# Bridge Project Day 3

Your group should be finalizing bridge builds, and begin to write/type up formal reports.

Ideally we are testing bridges next class, but if we have to push it back a day we can. *It will all depend on if you use class time wisely today! So work hard!*

# 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.

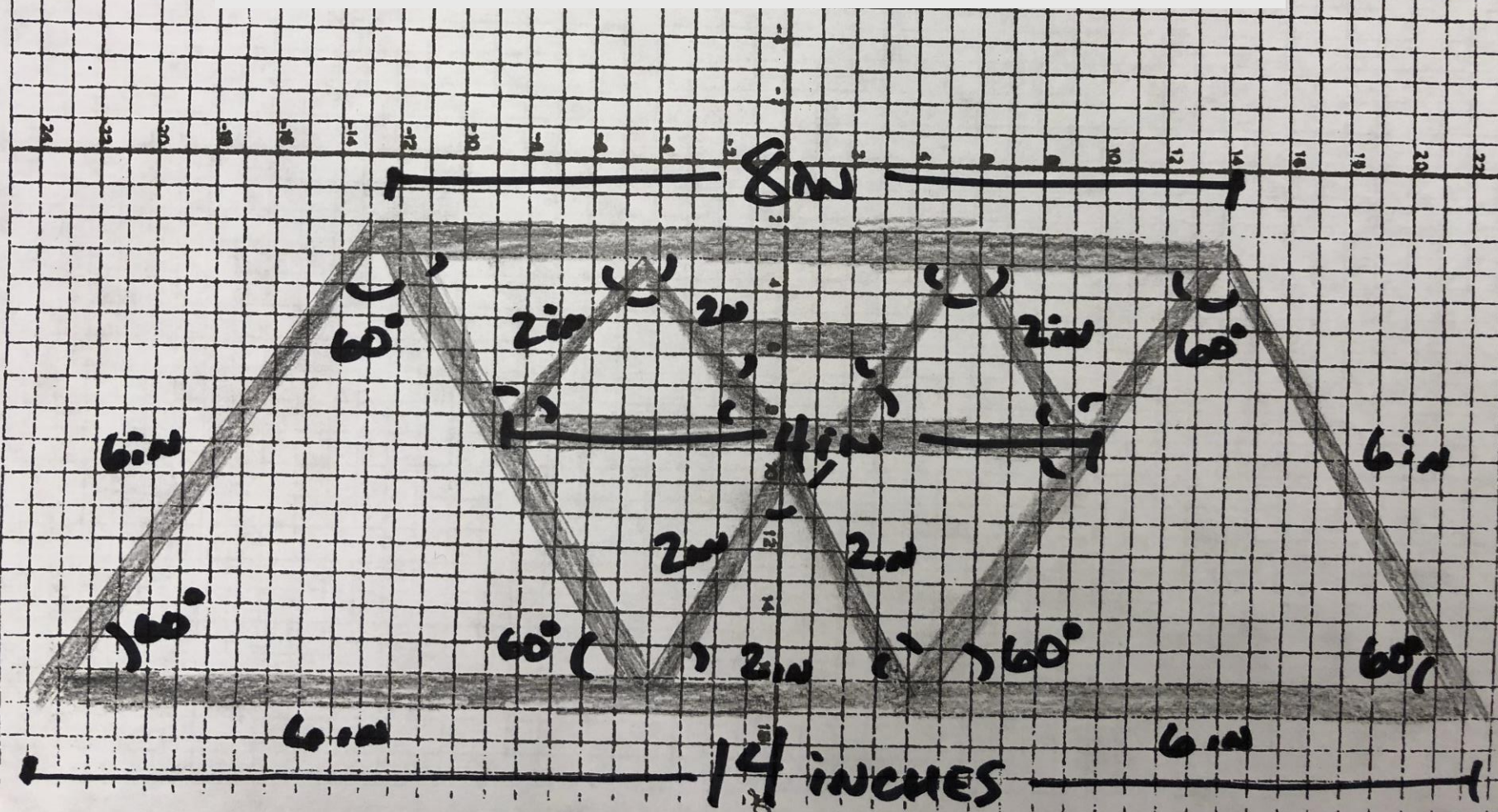
# Bridge Project

- 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

# Example of Blueprint Measurements





# 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 & 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