

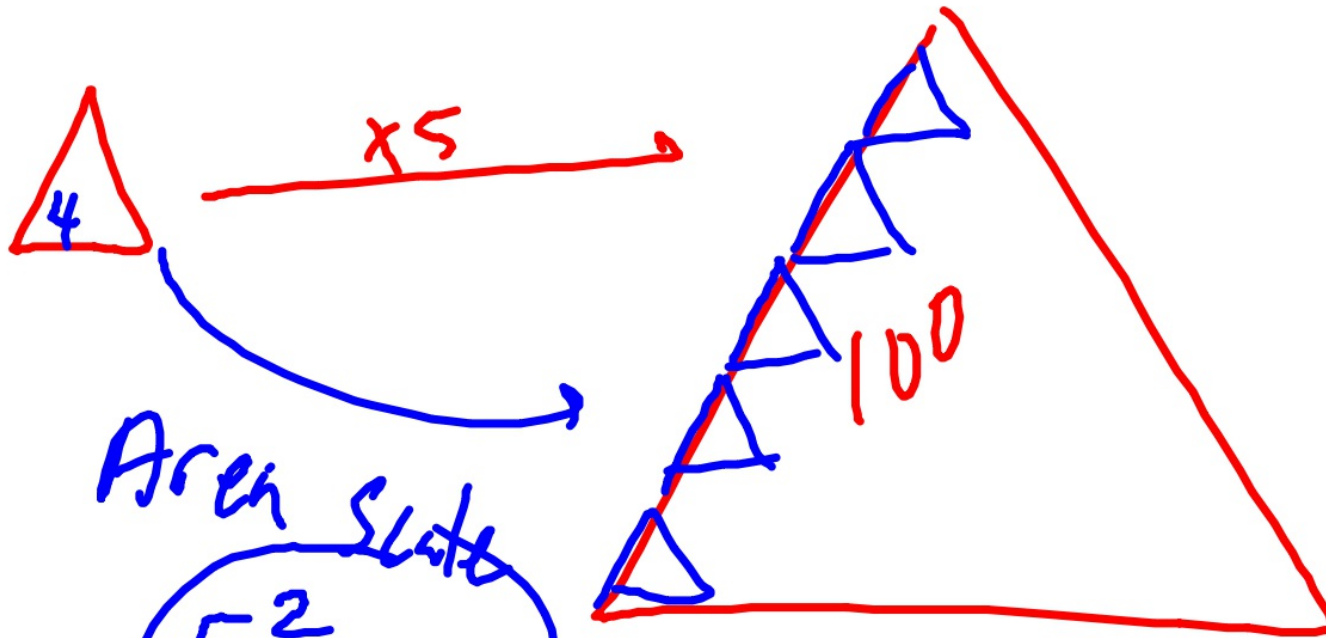
Good afternoon: assessments are being passed back

Look over them with your neighbors and work out and correct any mistakes

HW needed for retakes is in PS and on list by door

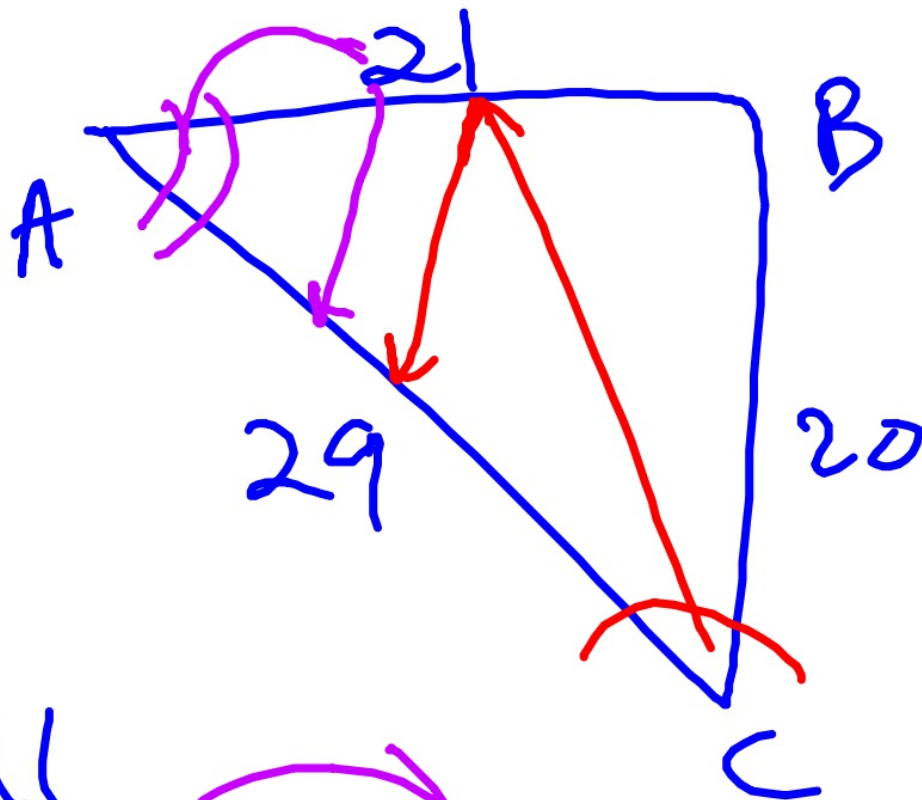
Retakes available in DS

**WILL NEED A DEVICE TODAY**



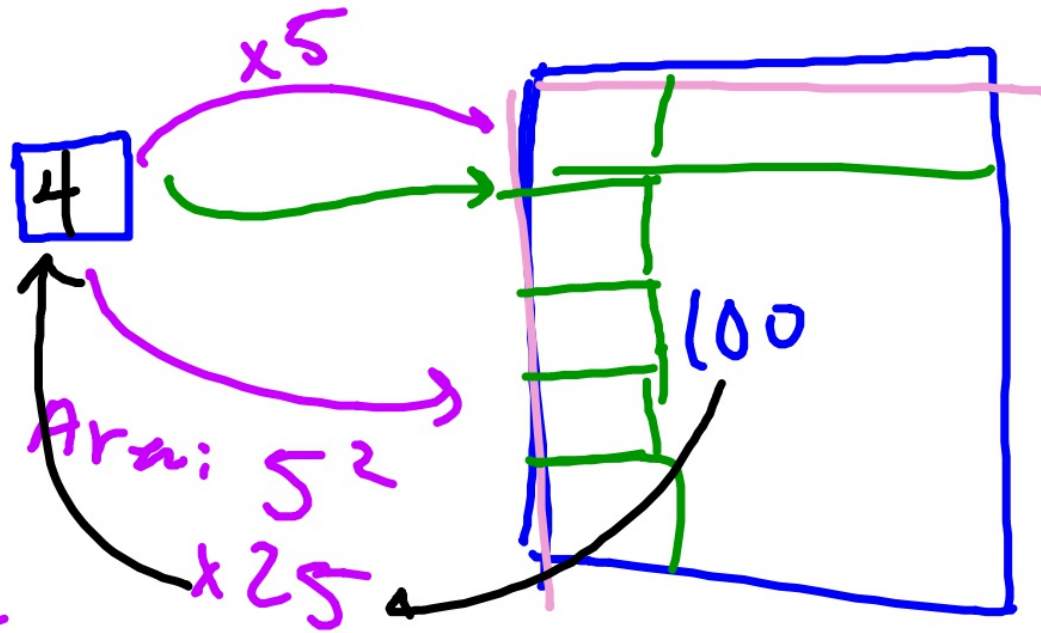
Area Scale

$$\begin{array}{r} 5^2 \\ = 25 \\ \hline 5 \end{array}$$

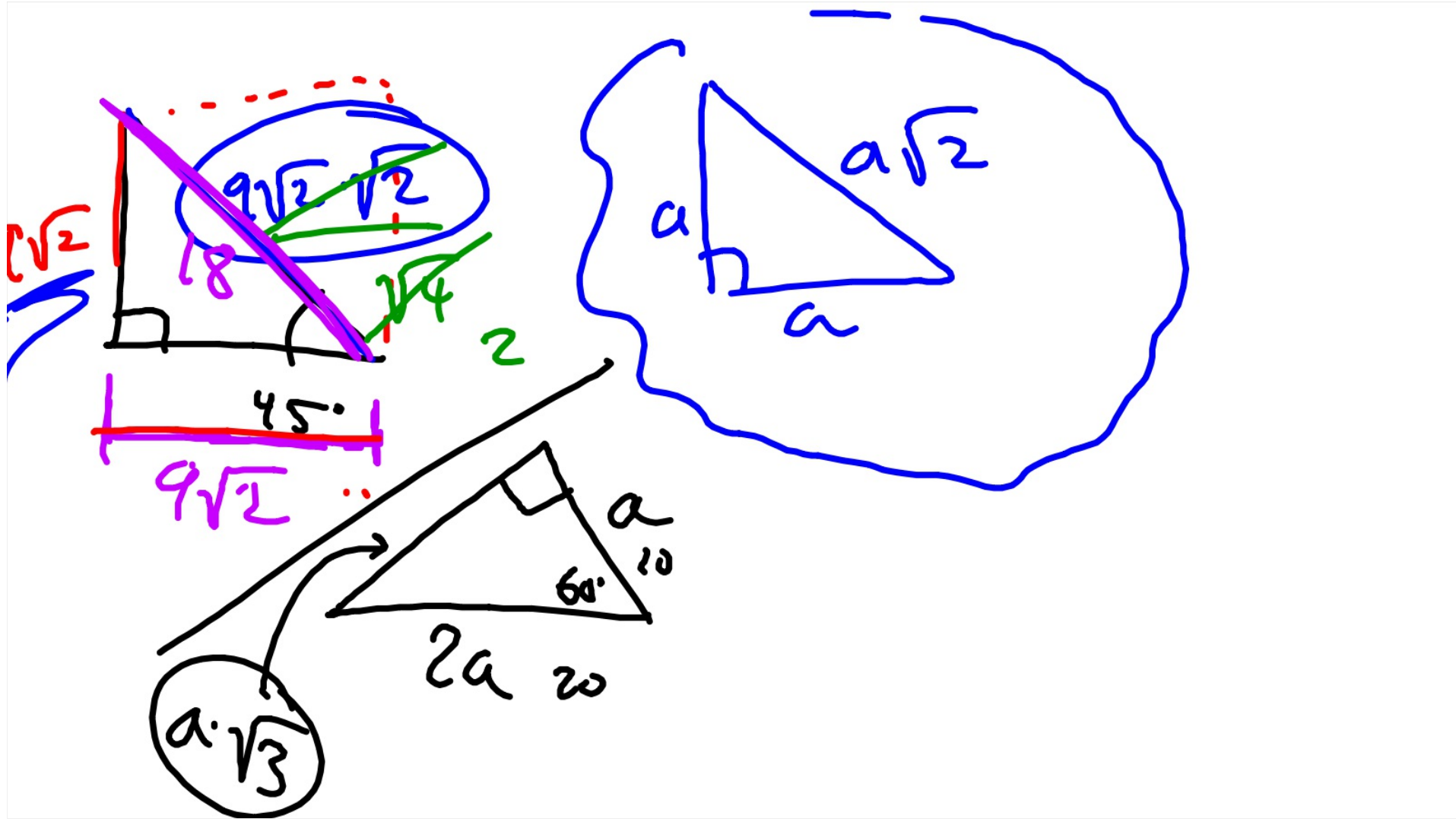


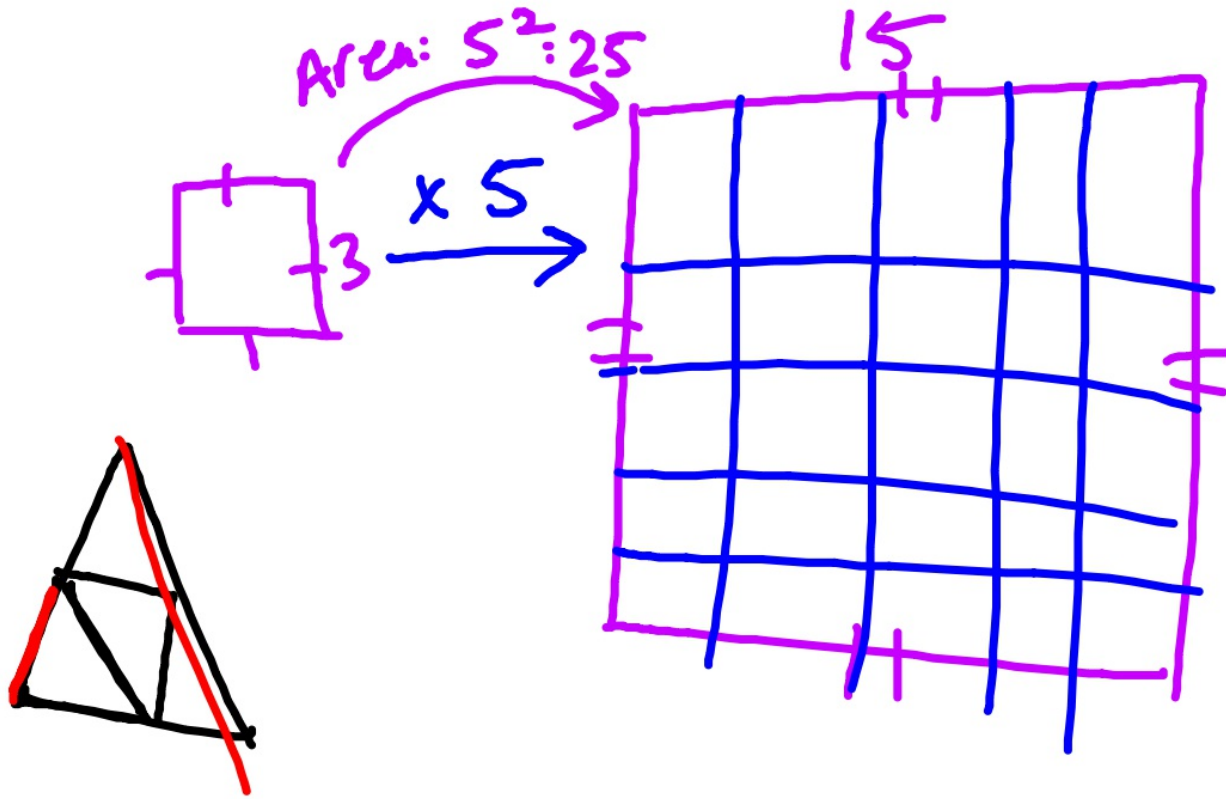
$$\checkmark \frac{21}{29} = \sin C$$

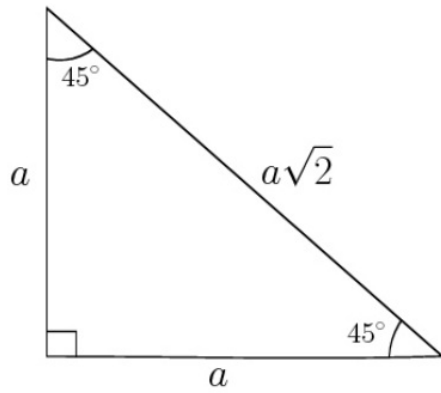
$$\frac{21}{29} = \cos A$$



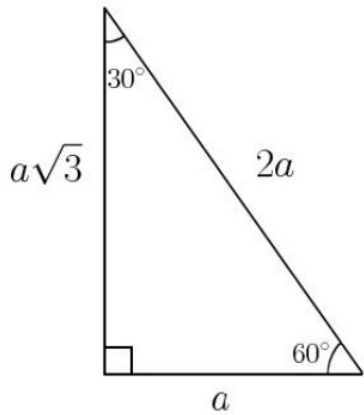
$x_1 k^2 = x_2$   
 ↑     ↑     ↑  
 old linear     new  
 area scale     area  
              factor







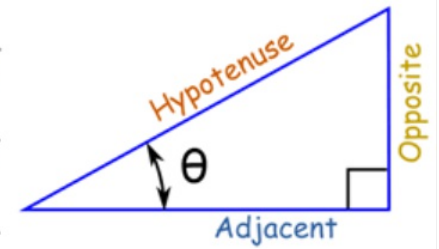
## Special Right Triangles



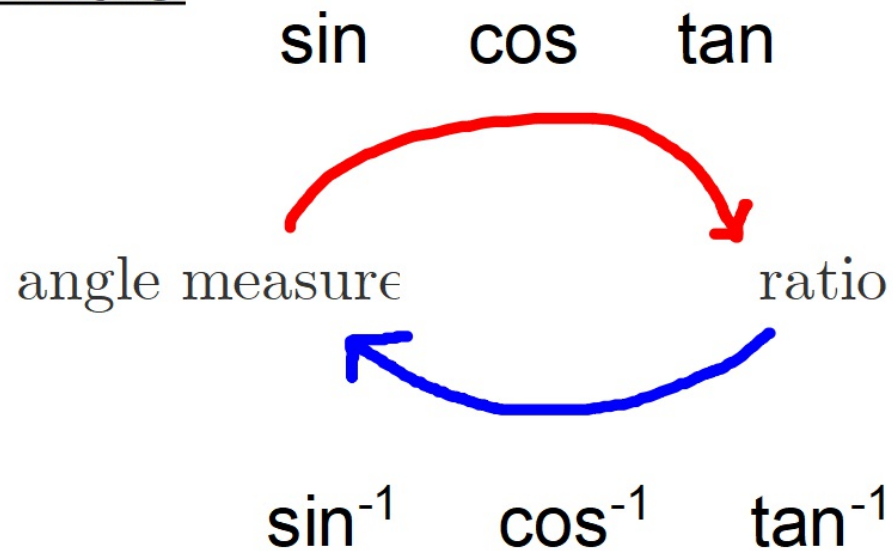
$$\sin \theta = \frac{\text{Opposite}}{\text{Hypotenuse}}$$

$$\cos \theta = \frac{\text{Adjacent}}{\text{Hypotenuse}}$$

$$\tan \theta = \frac{\text{Opposite}}{\text{Adjacent}}$$



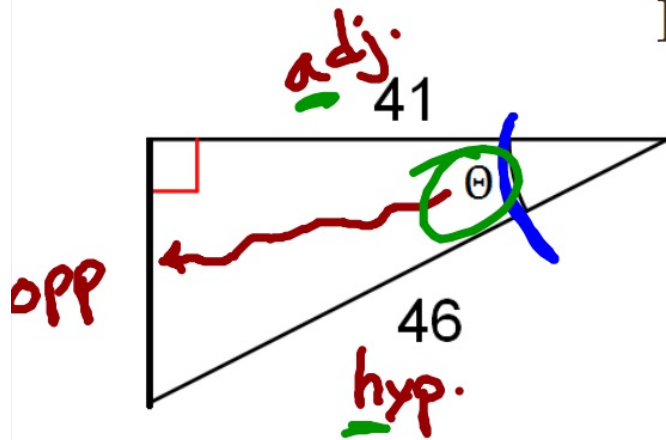
# INVERSE TRIG



"inverse sine, inverse cosine, inverse tangent"  
aka arcsin, arccos, arctan



Find the value of  $\theta$  to the nearest degree



SOH CAH TOA

$$\cos(\theta) = \frac{41}{46}$$

$$\cos^{-1}\left(\frac{41}{46}\right) = \theta$$

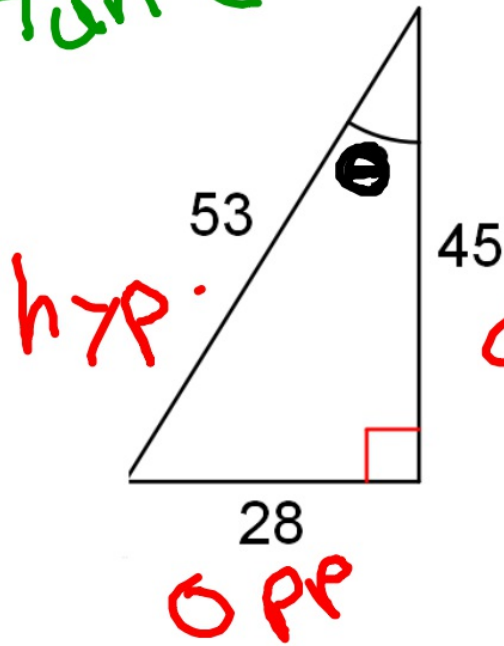
From reference angle, label opp/adj/hyp  
Determine best trig function to use  
Set up equation, invert, and solve



27°

Find the angle measure to the nearest degree.

$$\tan^{-1}(28/45)$$



$$\cos \theta = \frac{45}{53}$$

$$\cos^{-1}(45/53) = \theta$$

$$\boxed{32^\circ = \theta}$$

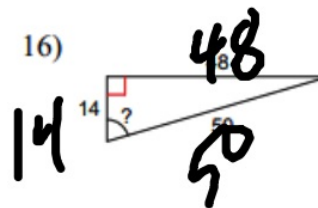
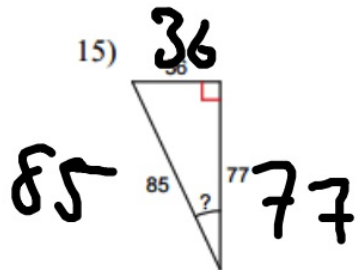
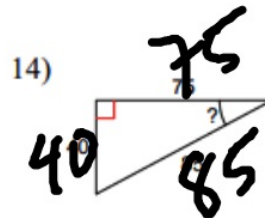
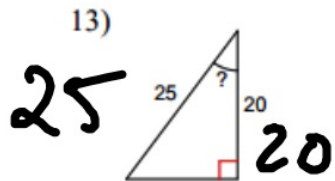
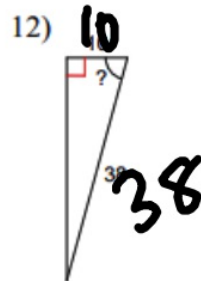
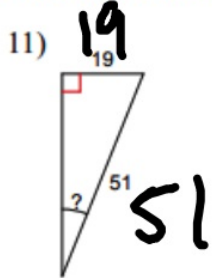
$$\sin \theta = \frac{28}{53}$$

$$\sin^{-1}(28/53) = \theta$$

$$\boxed{32^\circ = \theta}$$

Now try #11-16 on the handout from last Thursday

Find the measure of the indicated angle to the nearest degree.



- 11.  $22^\circ$
- 12.  $75^\circ$
- 13.  $37^\circ$
- 14.  $28^\circ$
- 15.  $25^\circ$
- 16.  $74^\circ$

I will show you a short video.

Thinking questions:

What do you notice?

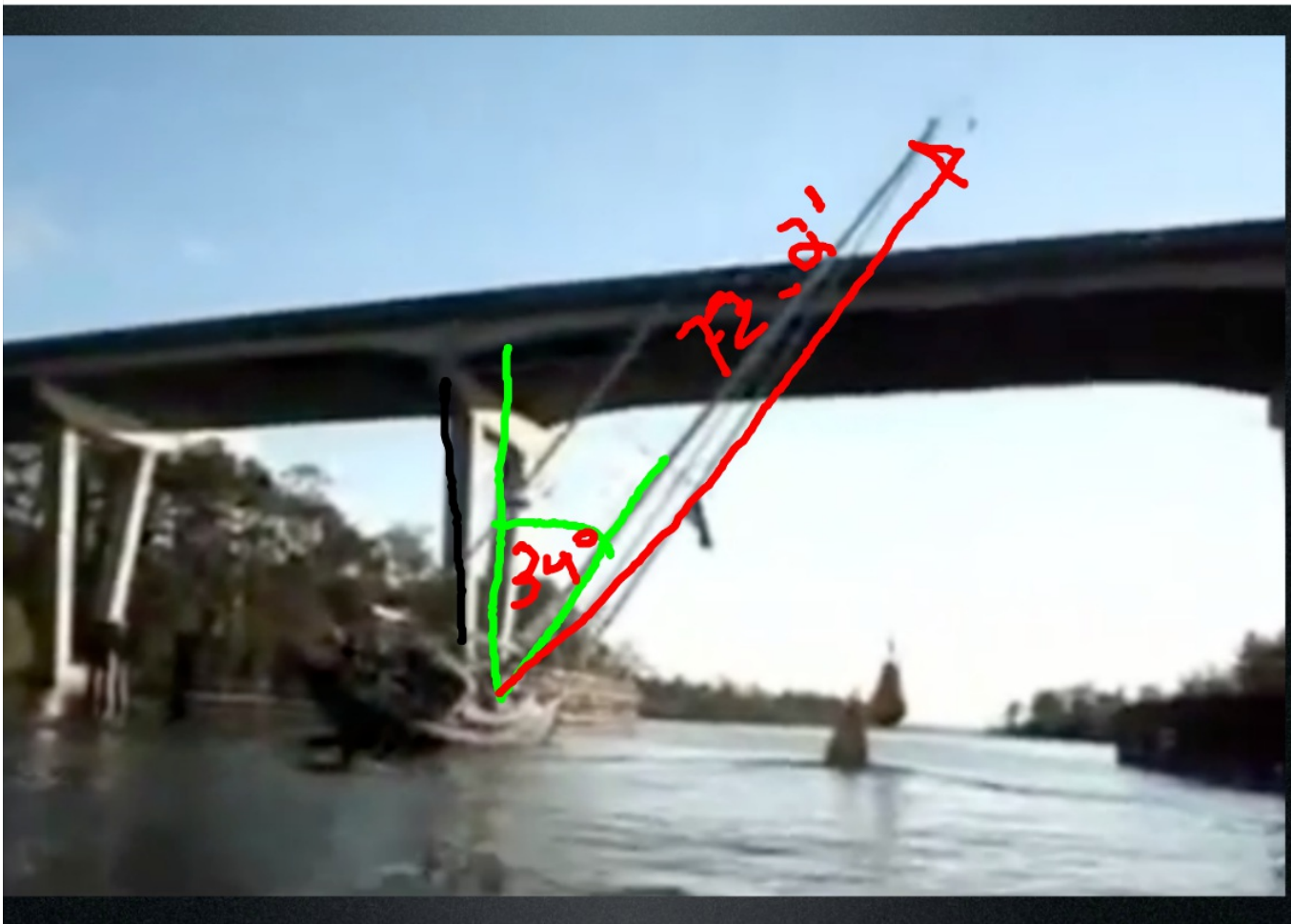
What do you wonder?

What do you notice? What do you wonder?



Will it fit? Guess.





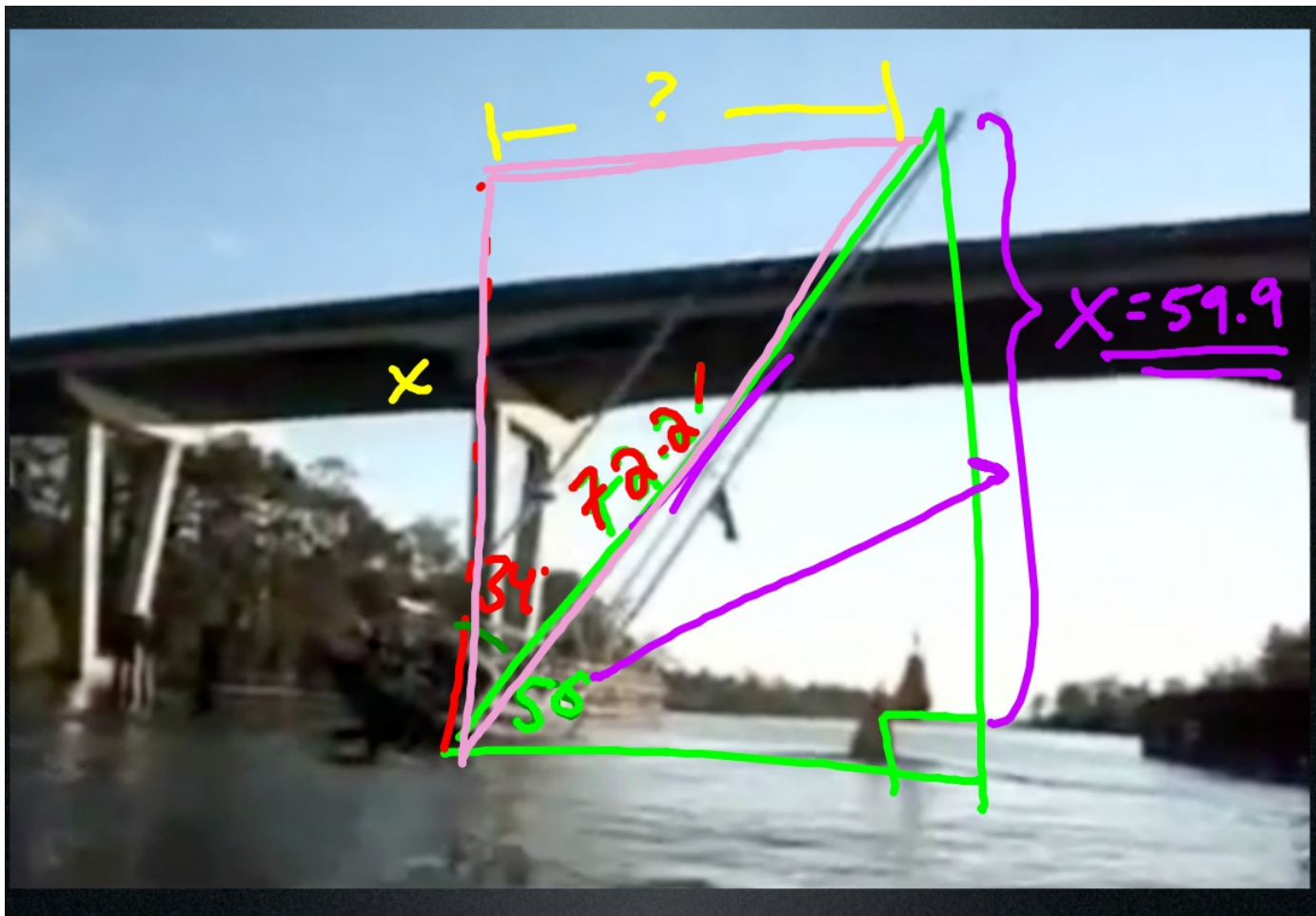
What do [REDACTED]  
to know to solve this?

Mast length: 72.2 ft

Bridge clearance: 60ft

Angle of sway:  $34^\circ$   
right of center





$$\sin 56 = \frac{x}{72.2'}$$
$$0.829 = \frac{x}{72.2}$$
$$\underline{\underline{59.9 = x}}$$



Will it really fit???



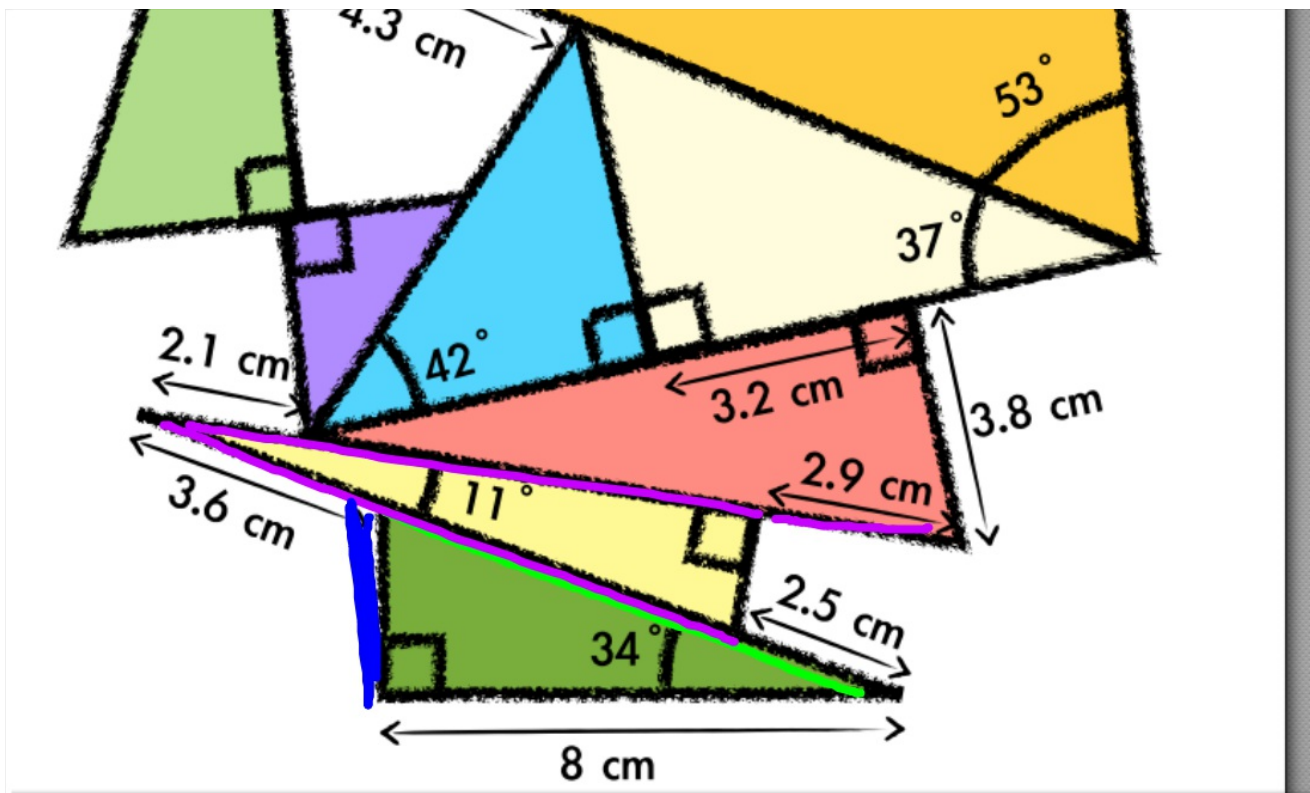
## Advanced Trig Kahoot

use your real name

it is very annoying when you don't

these questions are hard....use your brain. a random guess teaches you nothing!

Use the whiteboard to sketch out your ideas



HW  
 Trig Stack!  
 Start at the bottom

use 3 decimal place  
 for all trig ratios  
 and side lengths  
 for consistency

Next assessment delayed to Thursday 2/22