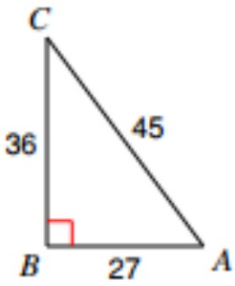
Do Now

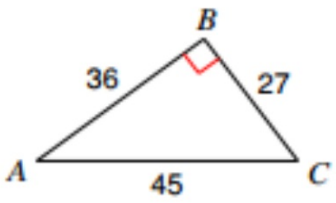
Calculators

Set up the trig ratio for #1-3. Then, solve for side "b" in #4.

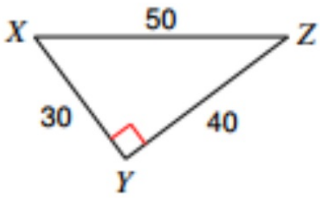
1 $\tan C$



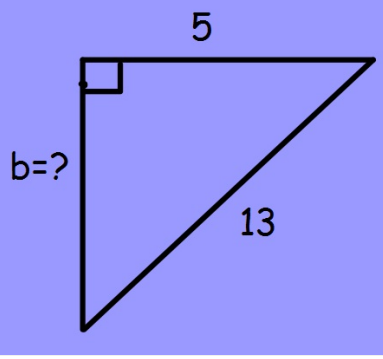
2 $\cos C$



3 $\sin Z$



4



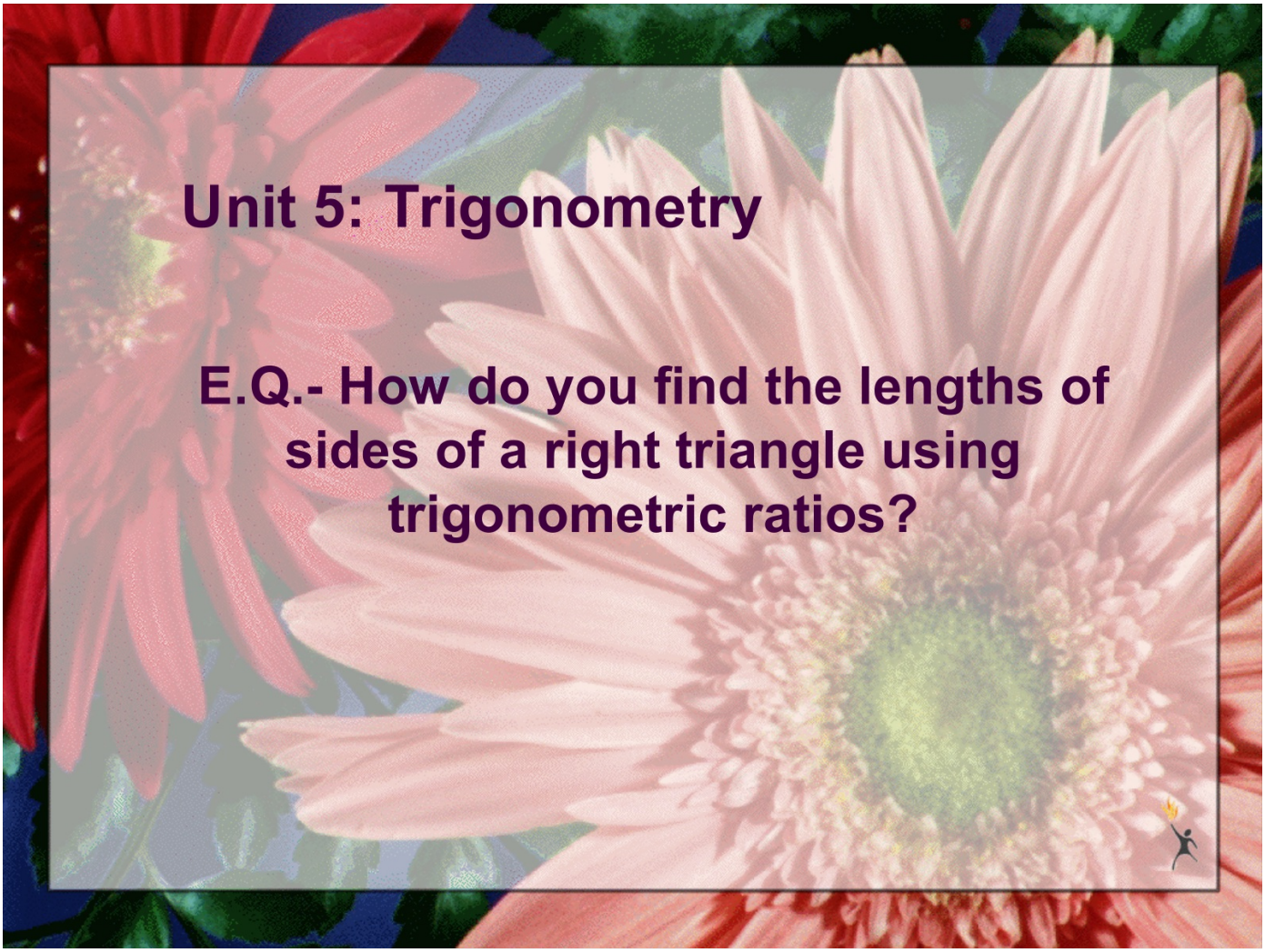
Agenda!

1. Review of Sine, Cosine, and Tangent

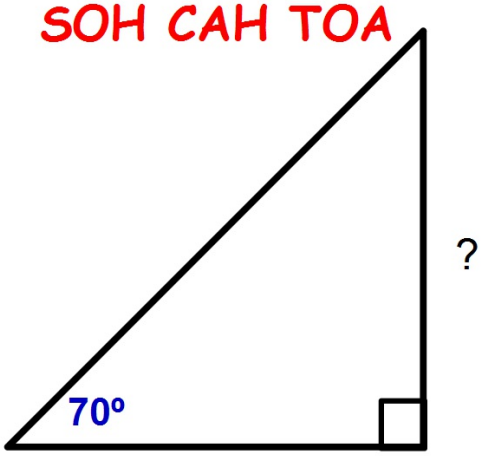
2. Try inverse of Sine, Cosine, and Tangent!

3. Independent Practice.

4. HW


Unit 5: Trigonometry
E.Q.- How do you find the lengths of sides of a right triangle using trigonometric ratios?

SOH CAH TOA



adj opp hyp

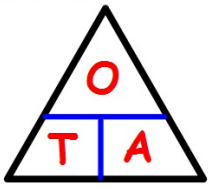
EXAMPLE 1

Step 1 : Label the Sides

Step 2 : Write out correct trig ratio

Tan = Opp ÷ Adj

Step 3 : Box the ratio. Write out correct relationship. Solve



Opp =Tan × Adj

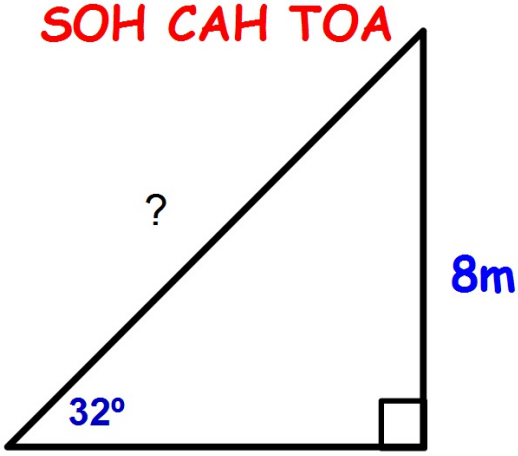
Opp = Tan 70° × Adj

Opp =

Opp =

Opp =

SOH CAH TOA



adj opp hyp

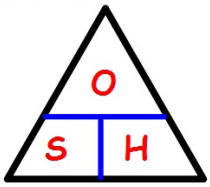
EXAMPLE 2

Step 1 : Label the Sides

Step 2 : Write out correct trig ratio

Sin = Opp ÷ Hyp

Step 3 : Box the ratio. Write out correct relationship. Solve



Hyp =Opp ÷ Sin

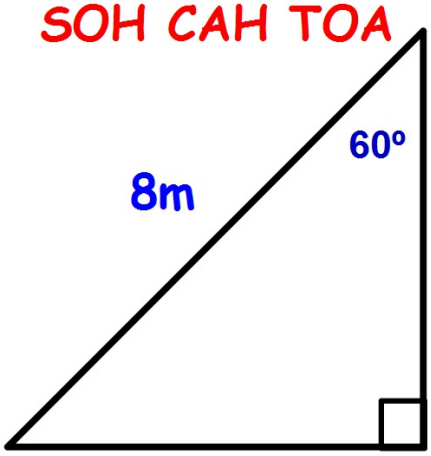
Hyp = 8 ÷ Sin 32°

Hyp = 8 ÷

Hyp =

Hyp =

SOH CAH TOA



adj opp hyp

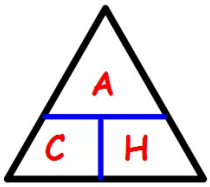
EXAMPLE 3

Step 1 : Label the Sides

Step 2 : Write out correct trig ratio

Cos = Adj ÷ Hyp

Step 3 : Box the ratio. Write out correct relationship. Solve



Adj =Cos × Hyp

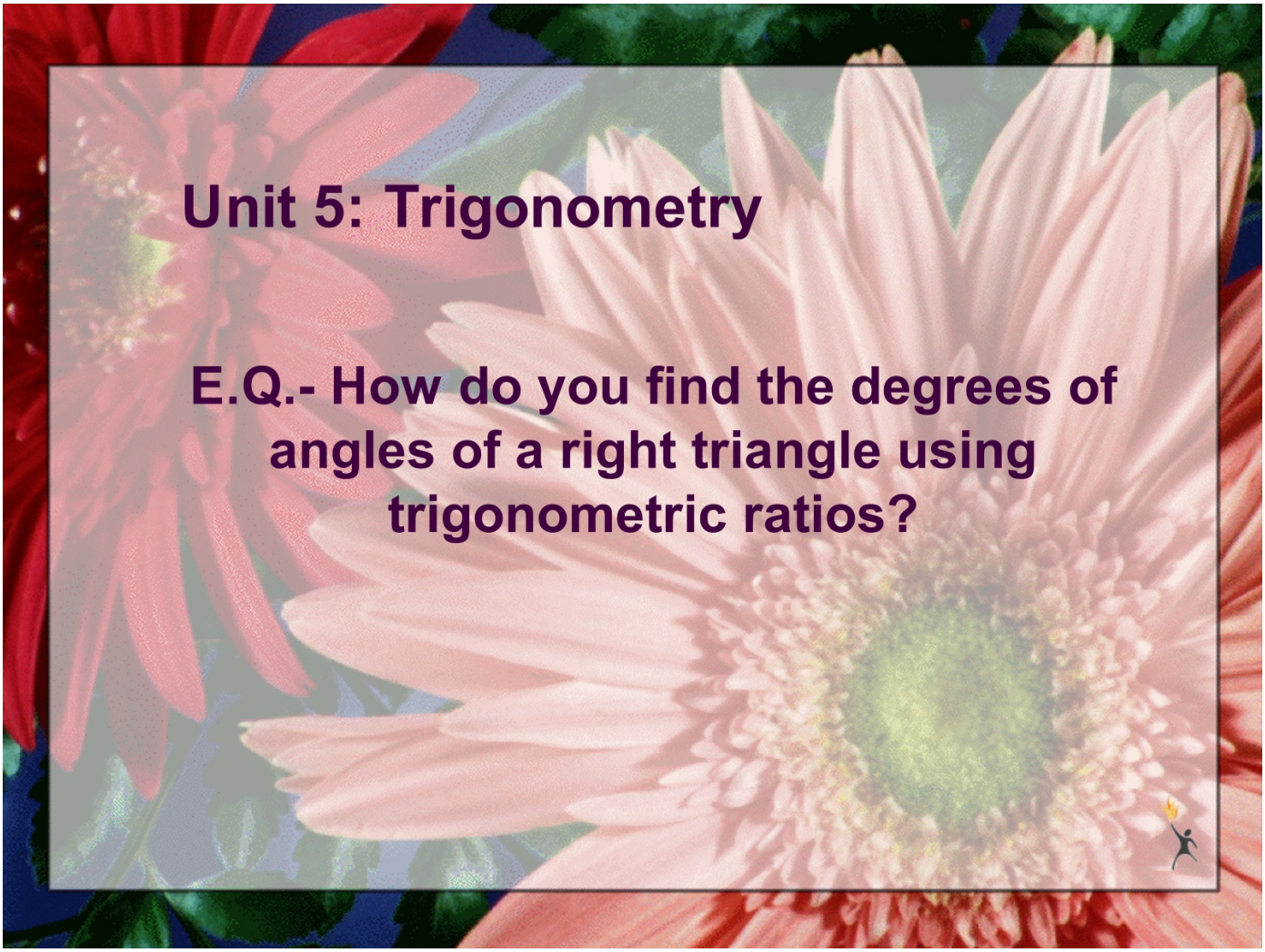
Adj = Cos 60° × 8

Adj =

Adj =

Adj =

1. In $\triangle TRY$, $\angle Y$ is a right angle and $\sin R = \frac{3}{5}$. What are the cosine and tangent of $\angle T$? Write your answers as fractions and as decimals.


Unit 5: Trigonometry
E.Q.- How do you find the degrees of angles of a right triangle using trigonometric ratios?

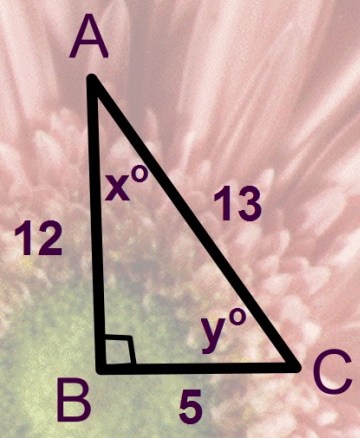
Inverse Trigonometric Ratios

(use when you are trying to find the angle)

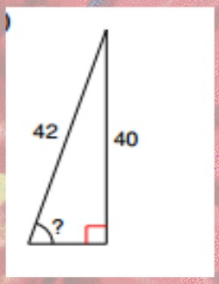
Inverse Sine:

$$\sin(x) = \frac{5}{13}$$

Use $\sin^{-1}\frac{5}{13} = x$



1.



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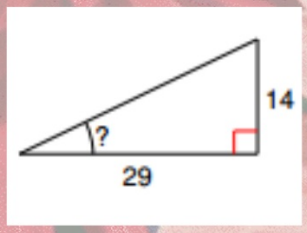

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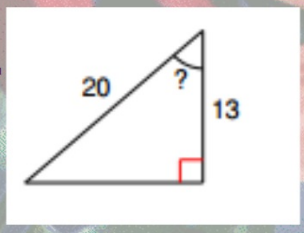
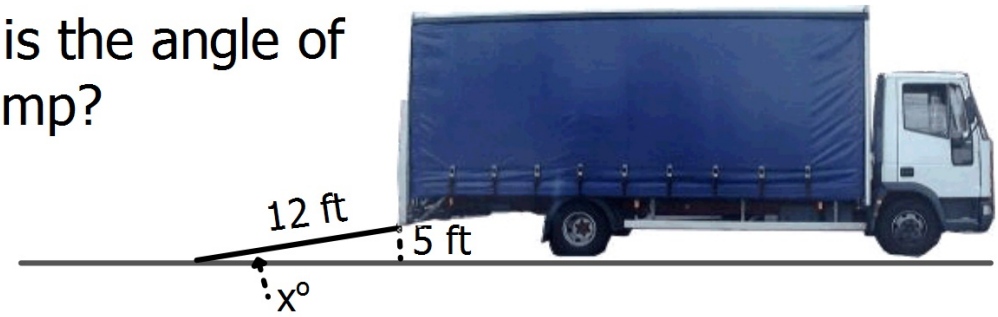


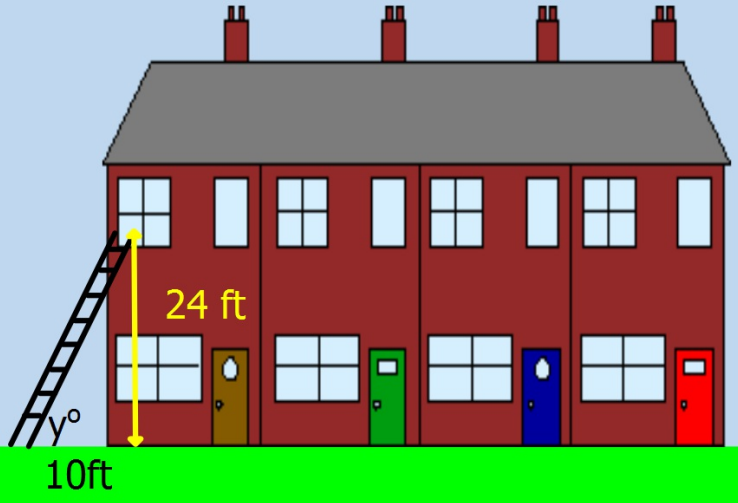
Your Turn to Try

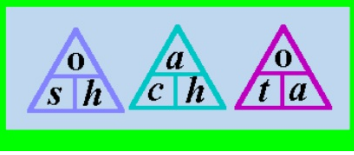
What is the angle of the ramp?

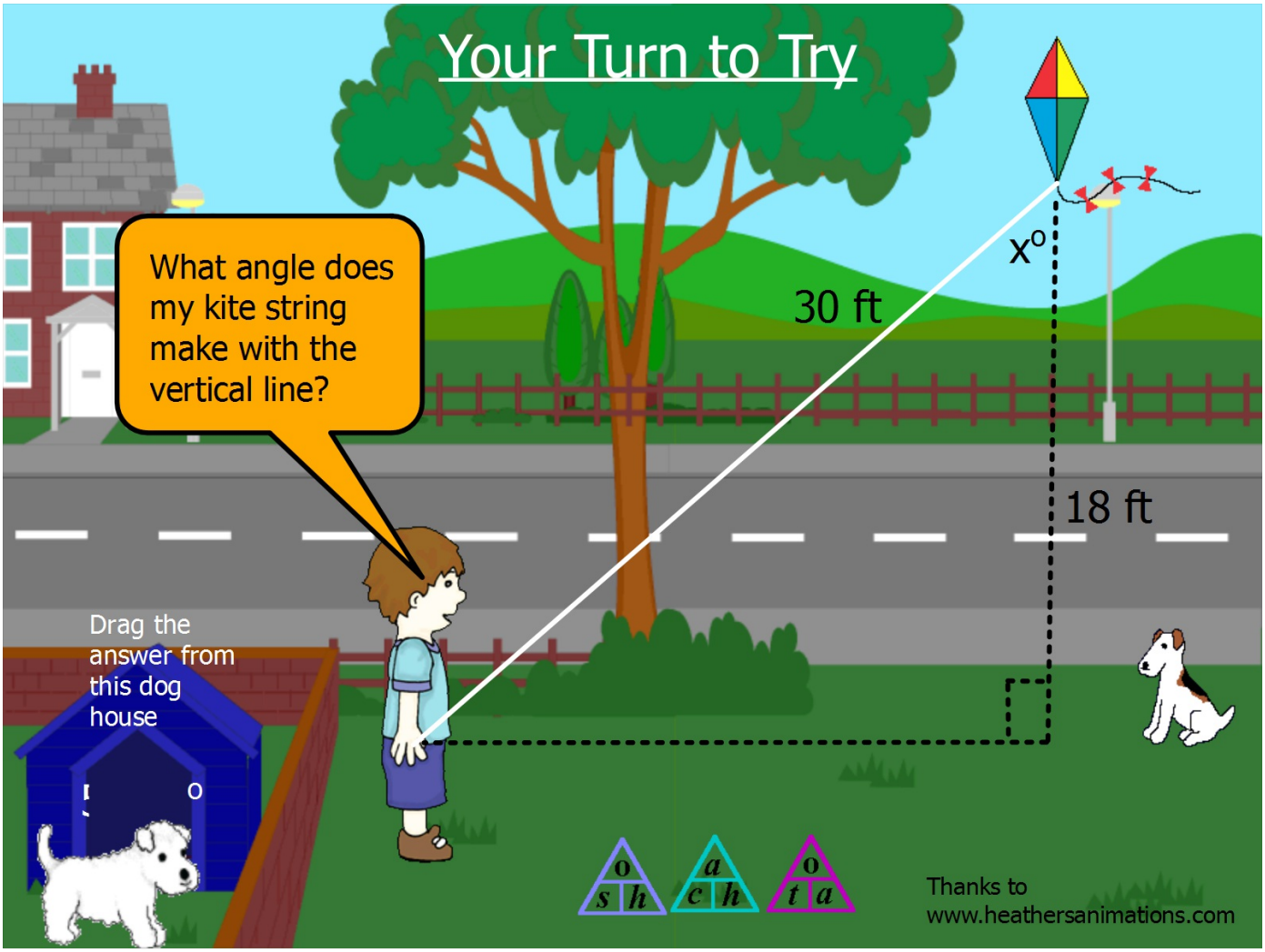


Your Turn to Try

What is the angle of the ladder?






Your Turn to Try
What angle does my kite string make with the vertical line?
30 ft
x°
18 ft
Drag the answer from this dog house
o
o s h
a c h
o t a
Thanks to www.heathersanimations.com

Independent Practice

1. This In Class Activity is at the Material Station.
2. Check your solution in the back.
3. Once you're finished, raise your hand and let Mr.Kim check.

Expectations:

- **Individual work.**
- **Ask your neighbor.**
- **Draw and label before asking Mr. Kim.**
- **I expect you to finish.**

When asking a neighbor, ask:
"How did you get that?"
"How did you draw the diagram for #___?"
"I got _____.What did you get?"