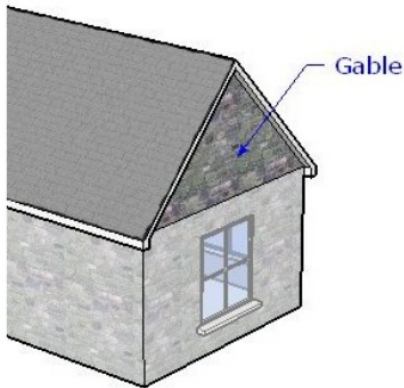
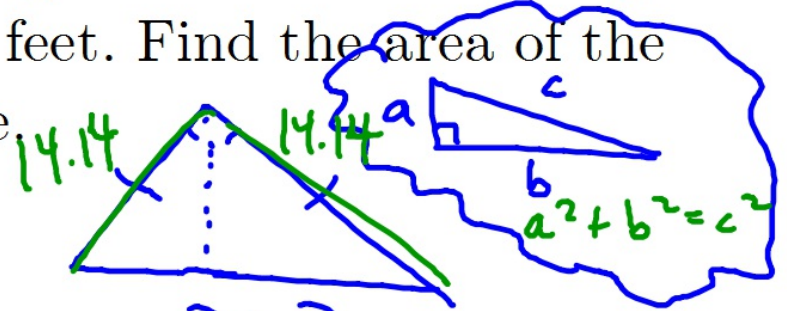


Good afternoon and welcome back! Warm up in notebooks

(will need textbook today!)



Shown here is a gabled roof. The garage width spans 20 feet. Find the area of the triangular gable.

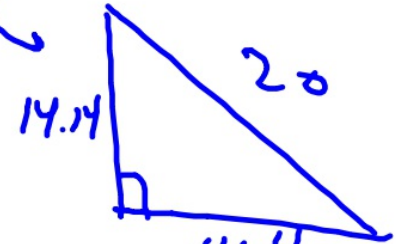


$$x^2 + x^2 = 20^2$$

$$\frac{2x^2}{2} = \frac{400}{2}$$

$$x^2 = 200$$

$$x = \sqrt{200} \approx 14.14$$



$$A = \frac{1}{2} (14.14)(14.14) = 100 \text{ ft}^2$$



Tutoring Change!!!

~~Tuesday afternoon~~

Wednesday afternoon

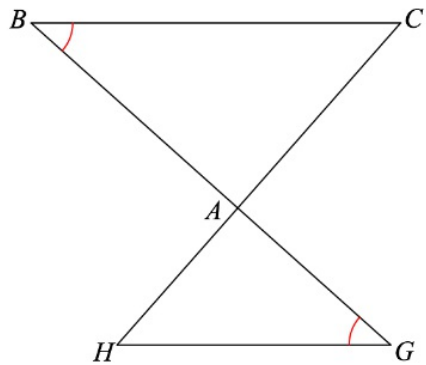


What are we learning this quarter?

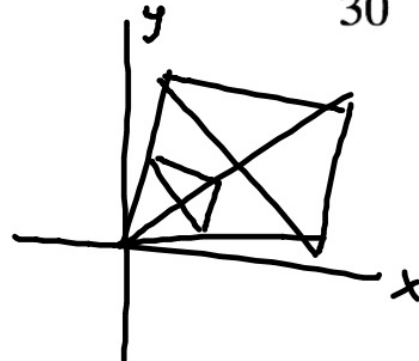
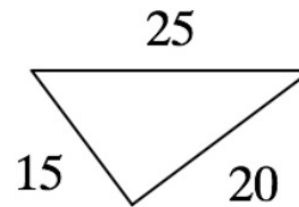
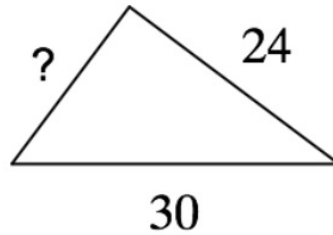
- Finishing similarity, similar triangles, special right triangles
- Trigonometry: basics, applications
- Volume and Area: Formula understanding, applications, math modeling, density, design
- Circles: arc length, sector area, radian measure

[Full list of Q3 learning targets to be passed out on Monday]

What do you remember about similarity and similar triangles?

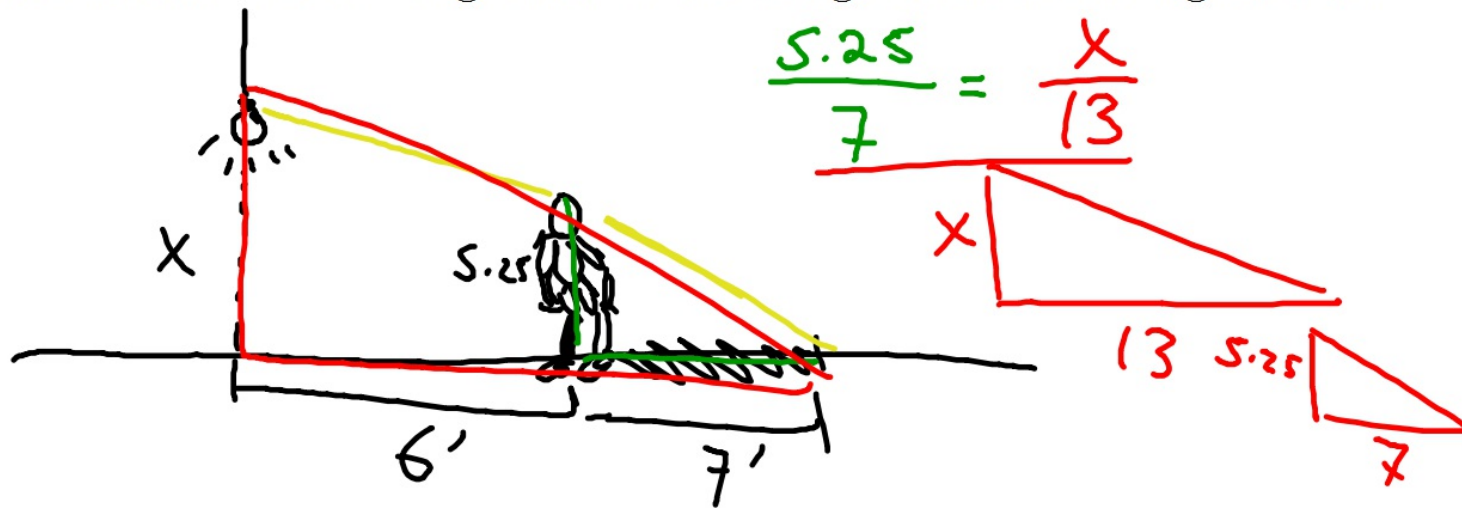


$\triangle ABC \sim$ _____



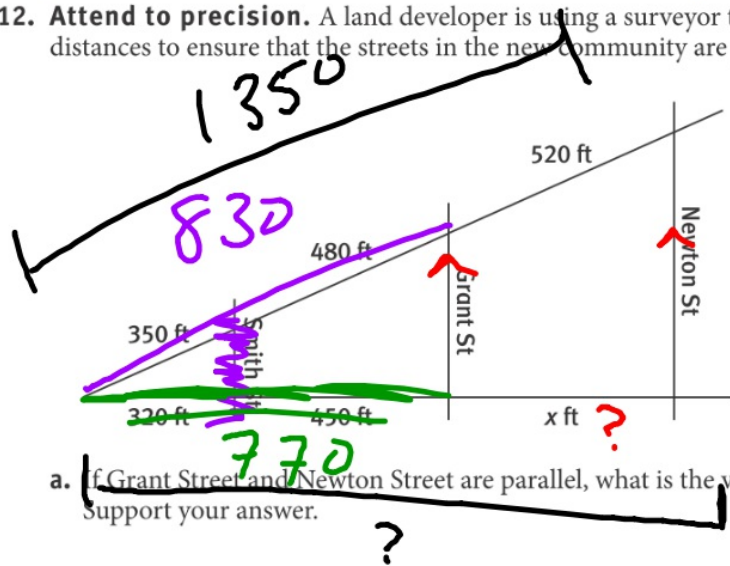
Indirect Measurement

A dangling lightbulb hangs above a stage. A $5\frac{3}{4}$ actor stands 6 feet from the spot on the floor directly below the bulb where she casts a 7 foot shadow. How high above the stage floor is the lightbulb?



Proportions, Parallels, and Triangles: p. 269 #12

12. **Attend to precision.** A land developer is using a surveyor to measure distances to ensure that the streets in the new community are parallel.



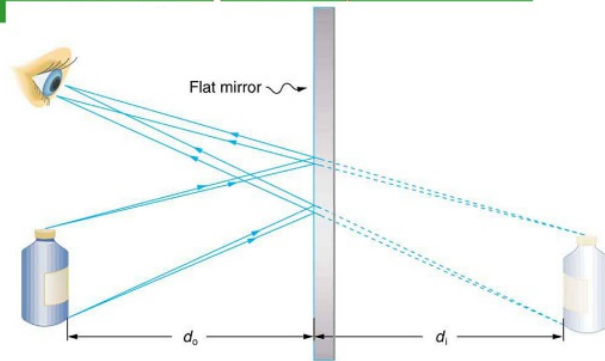
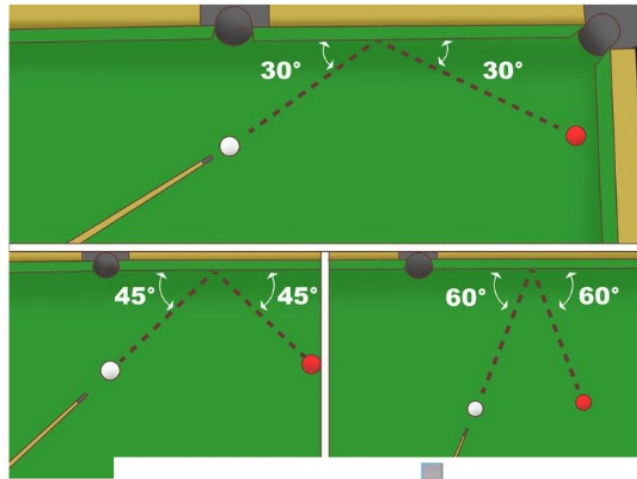
$$\frac{830}{520} = \frac{770}{x}$$

$$x = 482.41'$$

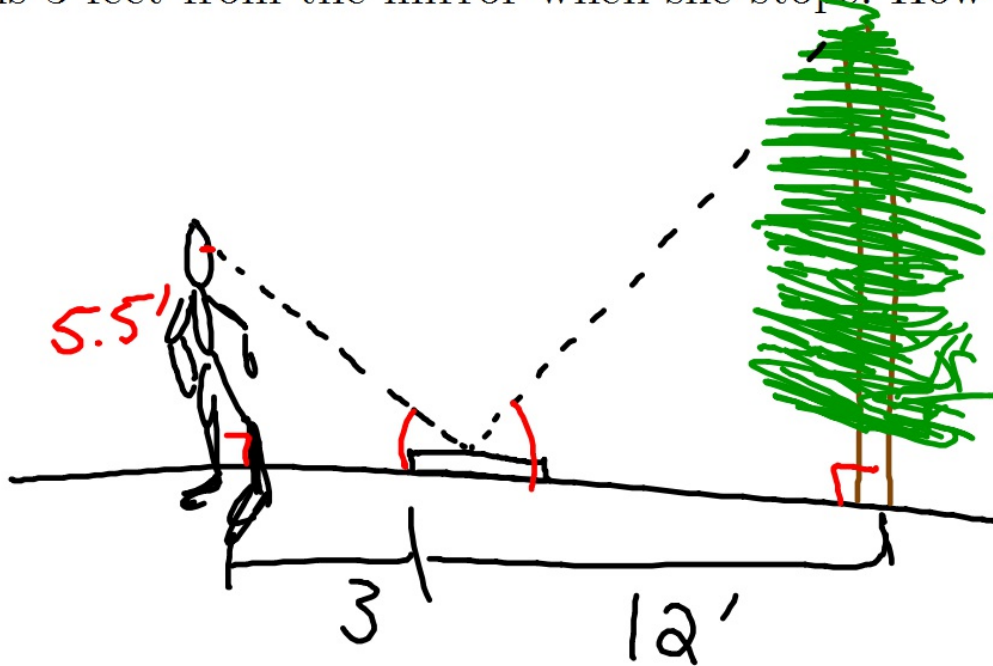
a. If Grant Street and Newton Street are parallel, what is the value of x ? Support your answer.

b. Are Smith Street and Grant Street parallel? Support your answer.

Angle of Incidence/Angle of Reflection



A mirror is placed 12 feet from the base of a Douglas Fir. A student whose eye is 5'6" from the ground walks back from the mirror until she sees the top of the tree in the mirror. She is 3 feet from the mirror when she stops. How tall is the fir?



Write your own indirect measurement problem!

Private think time

Types studied so far:

- Sunlight shadows: separate triangles
- Artificial light shadows: overlapping tri.
- Reflected light: adjacent triangles

Pass your index card to the left
Solve your neighbor's problem
Pass the card to the left again
Check over the work
Return the card to its creator



On the back of the index card, write what you feel is the most significant idea from today's lesson

hw:

p. 272 #7, 12, 13

~~p. 281 #1, 2~~