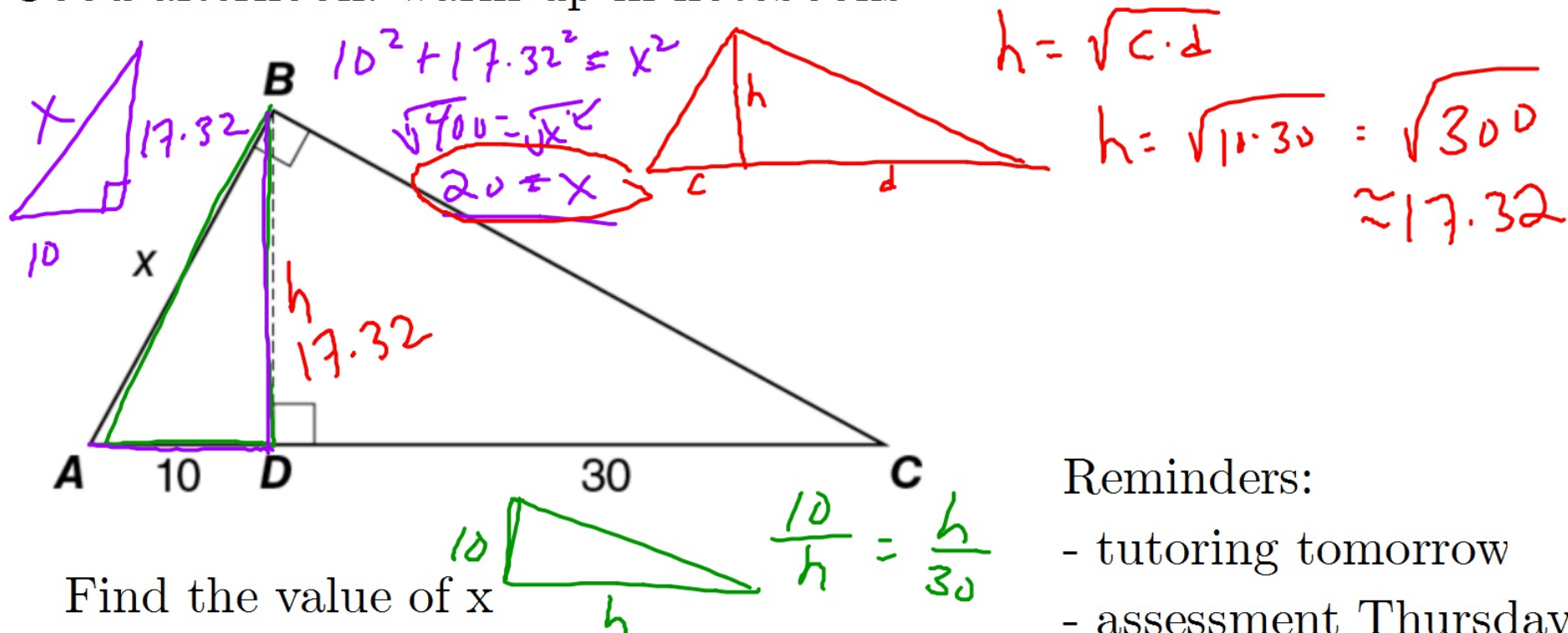


Good afternoon: warm up in notebooks

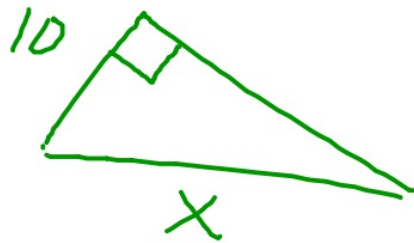
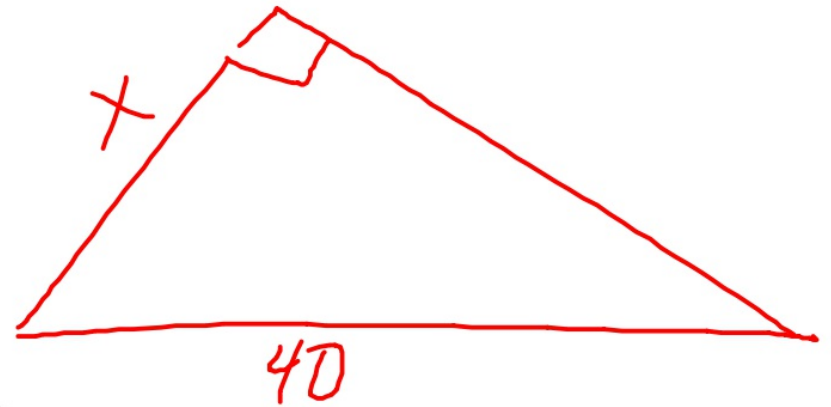
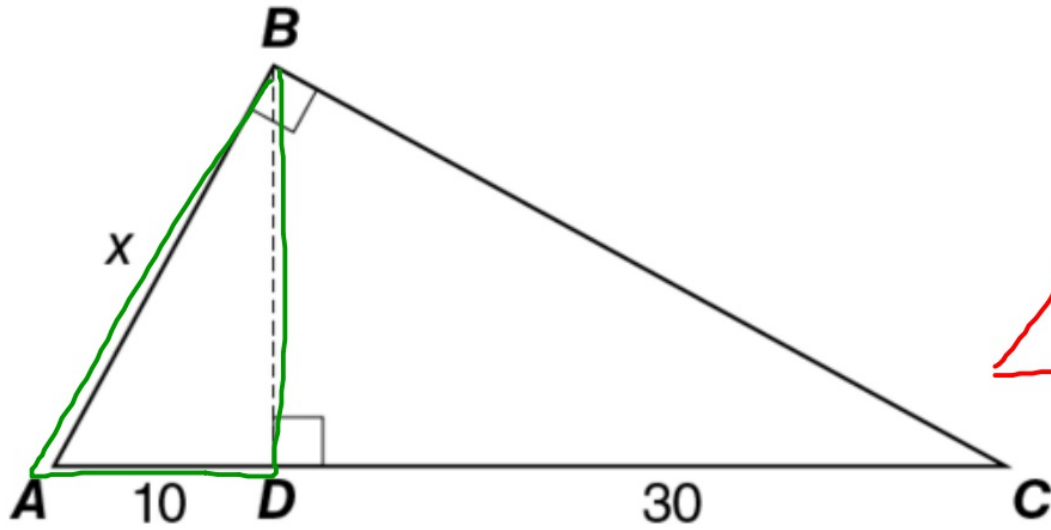


Find the value of x

Can you do it two different ways?

Reminders:

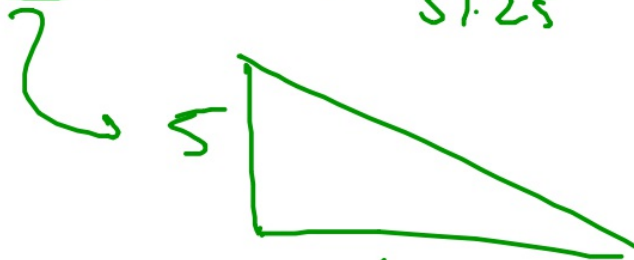
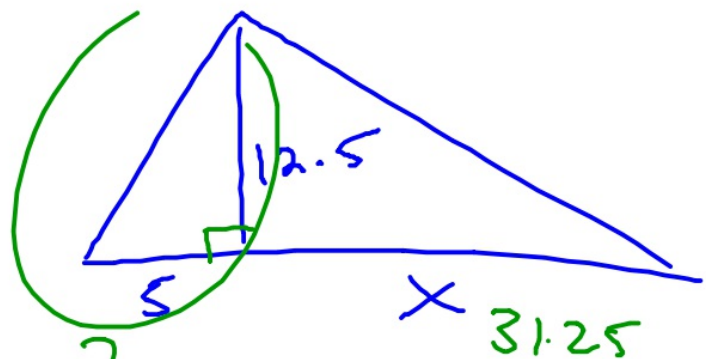
- tutoring tomorrow
- assessment Thursday



$$\frac{10}{x} = \frac{x}{40}$$

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

$$20 = x$$



$$\frac{5}{12.5} = \frac{12.5}{x}$$

$$156.25 = 5x$$

Q3 Learning Goals

What's on Thursday's assessment?

Honors Geometry – 3rd Quarter Assessment Grades Name: _____

Most recent grade entered in PowerSchool. Two consecutive scores of 3 or higher required. Each standard is assessed at least twice. Re-taking an assessment requires proof of completed homework.

• Triangle Proportionality SRT-B4b: I can prove that a line parallel to one side of a triangle divides the other two proportionally.

Date					
Score					

• Pythagorean Theorem and its Converse SRT-B4c: I can prove the Pythagorean Theorem using similarity.

Date					
Score					

• Geometric Mean SRT-B5d: I can use similarity criteria and similarity *within* right triangles to demonstrate geometric mean.

Date					
Score					

• Special Right Triangles SRT-C6a: I understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles.

Date					
Score					

• Basics of Trigonometry SRT-C6b: I can develop and use basic trigonometric ratios (including inverses) to solve right triangles.

Date					
Score					

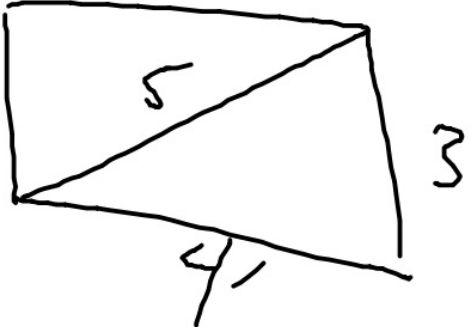
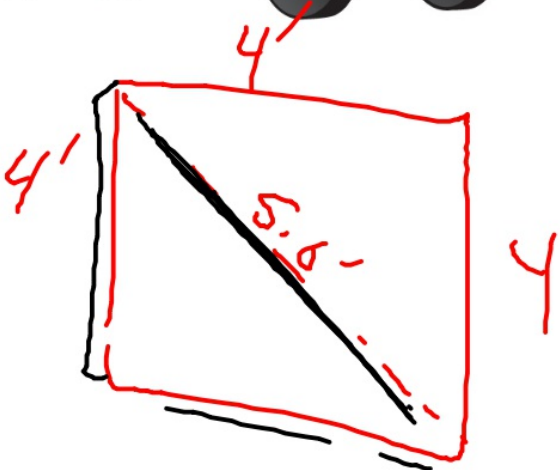
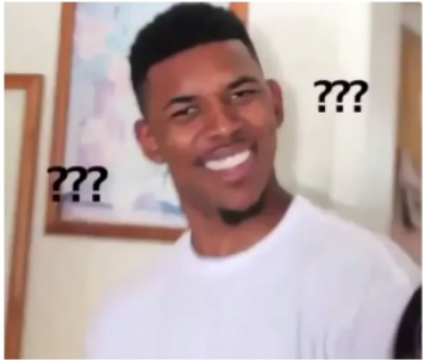
Sine and Cosine of Complementary Angles SRT-C7a: I can explain and use the relationship between the sine and cosine of complementary angles.

Date					
Score					

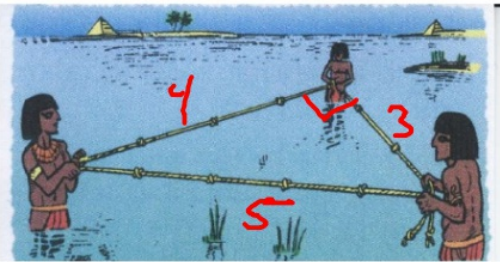
Using Pythagorean Theorem and Trigonometry SRT-C8a: I can use trigonometry and the Pythagorean Theorem to solve right triangles in applied problems and math modeling.

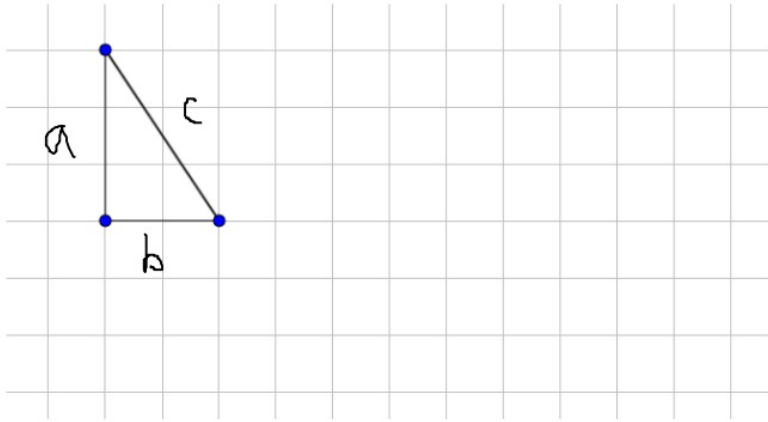
(no need to write this down)

A person buys a 5 foot long fishing pole from a store. He begins to board the bus to return home when the driver informs him that objects longer than 4 feet are not allowed on the bus. Disappointed, he goes back into the store, only to emerge a few minutes later. He boards the bus along with his fishing pole without any issue. What has he done? (Pole has not been telescoped/collapsed/etc.)

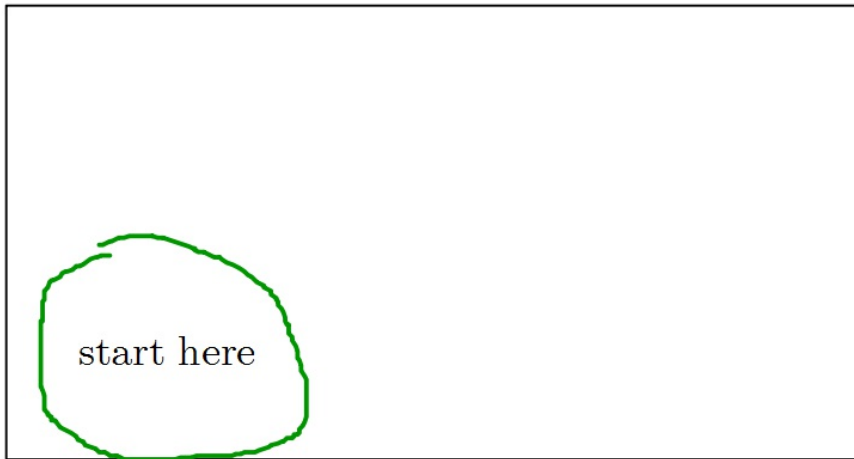


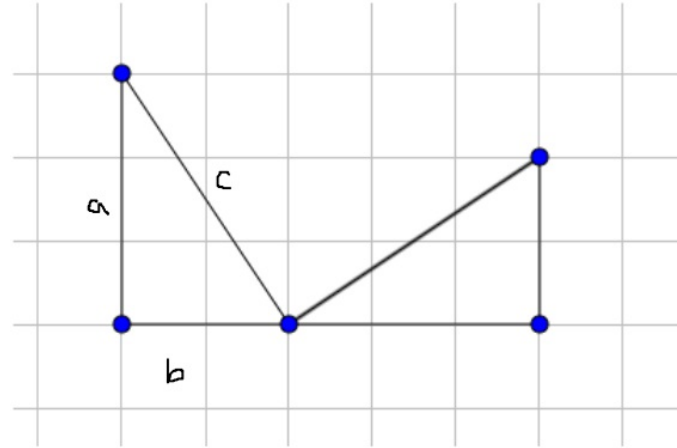
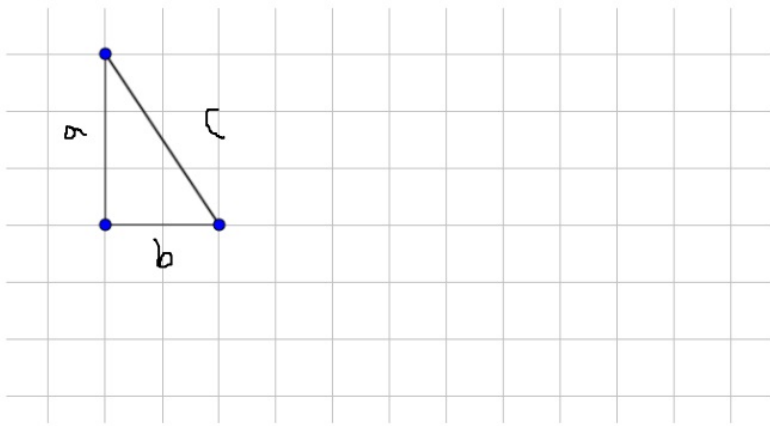
We use the Pythagorean Theorem all the time. But why does it work?



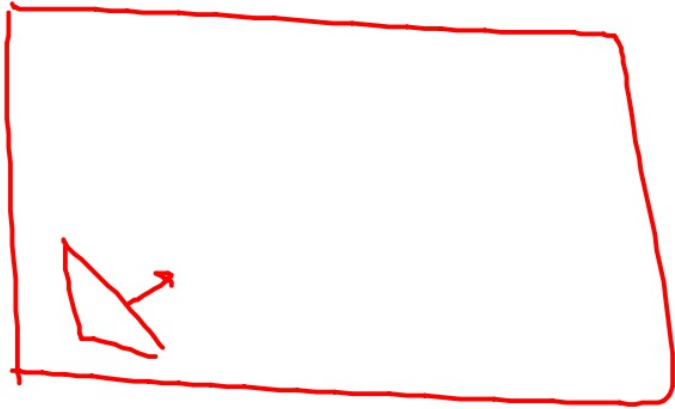


Use the grid to make a right triangle. Mine has legs of 2 and 3. Yours should be different!!

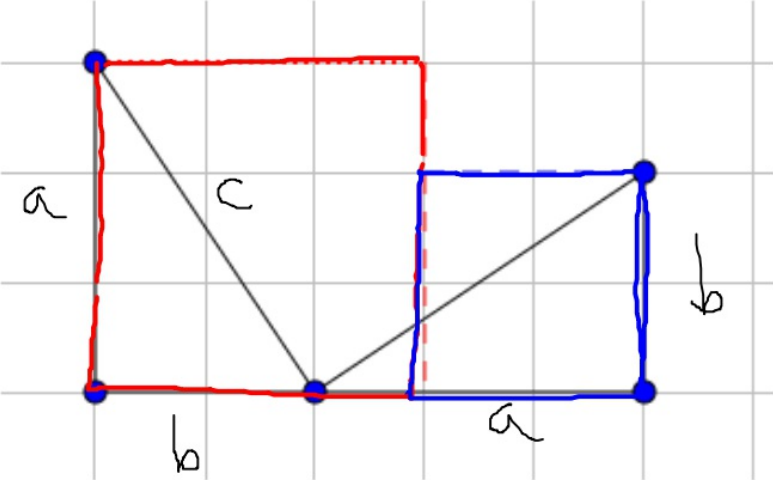




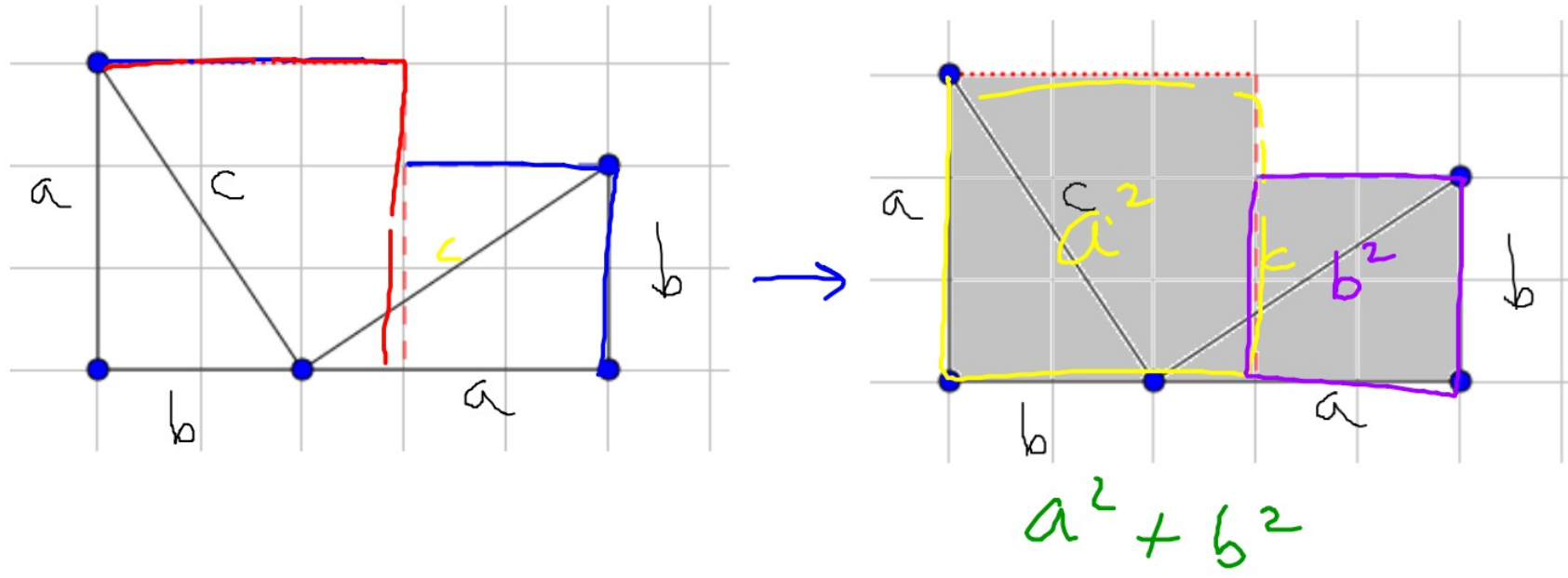
Copy the triangle as shown



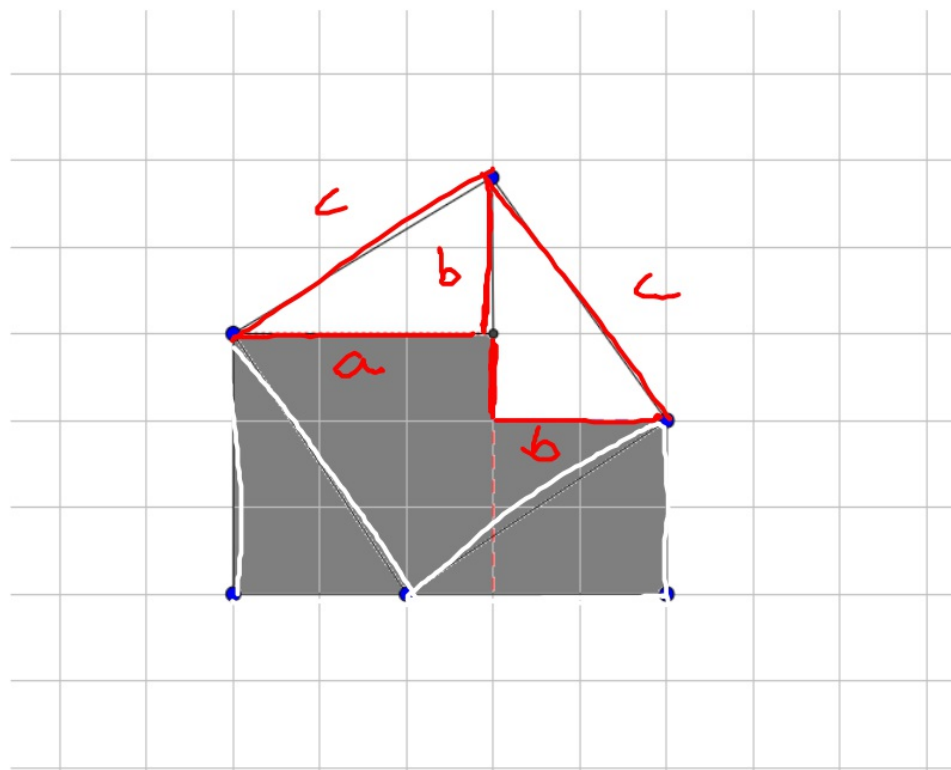
Make squares, one with side length a , the other with b



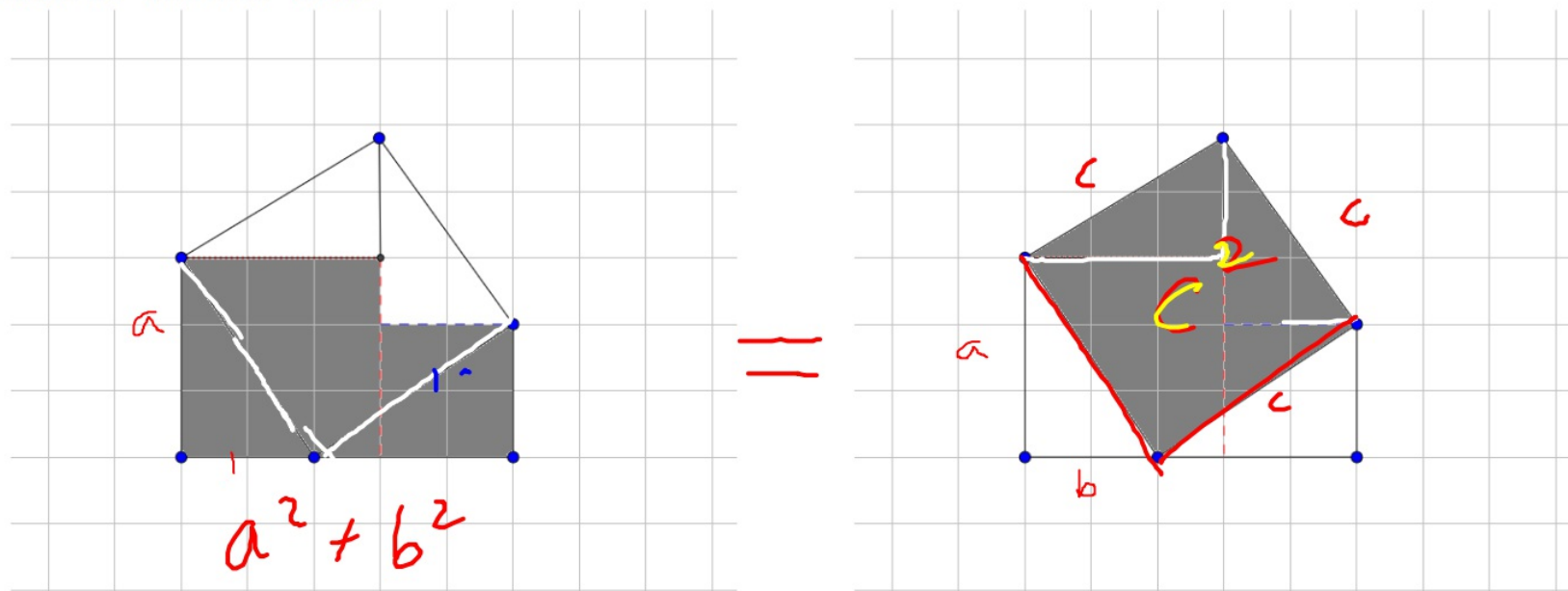
Shade the squares in with pencil. What is their combined area?



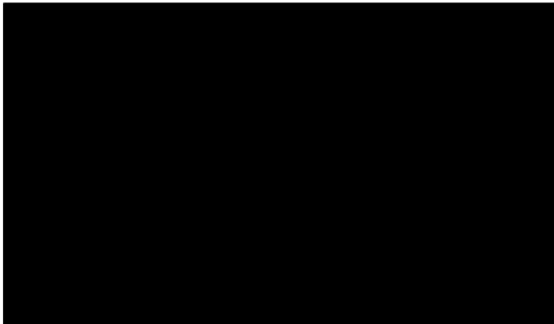
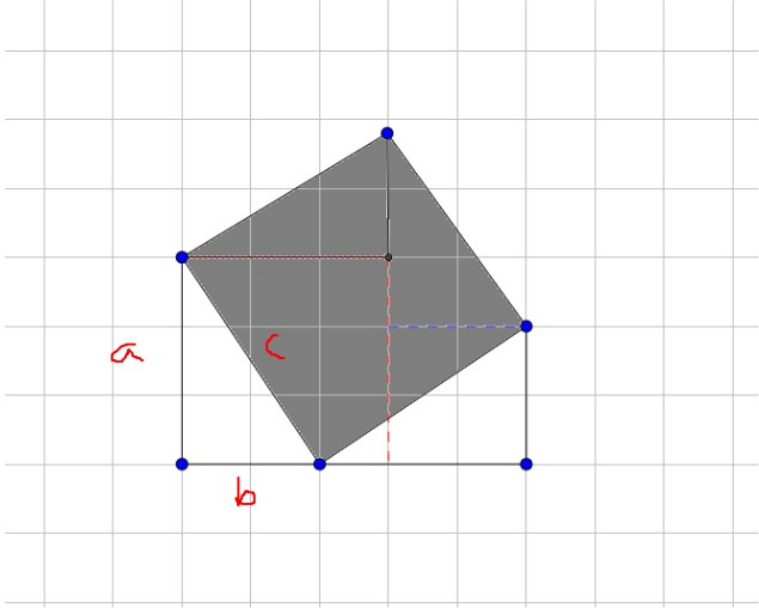
Make two more copies of your triangle like so:



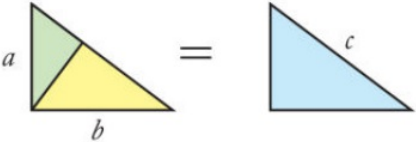
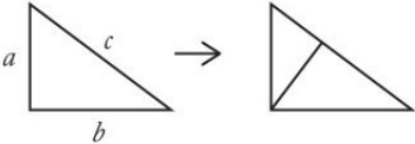
Erase the shading on your original triangles
and shade in the new ones



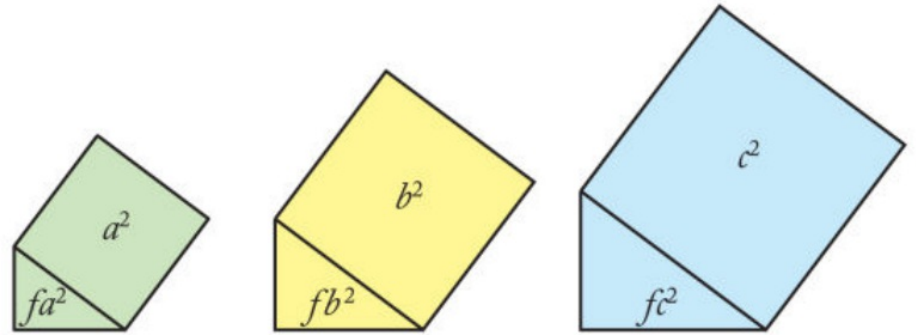
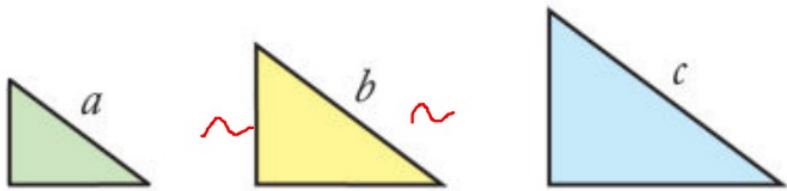
What kind of shape is this? What is its area? Give two different representations of its area



Einstein's Childhood Proof of the Pythagorean Theorem

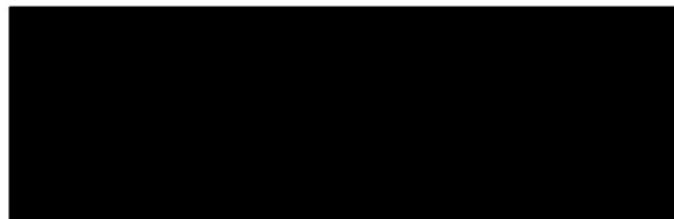
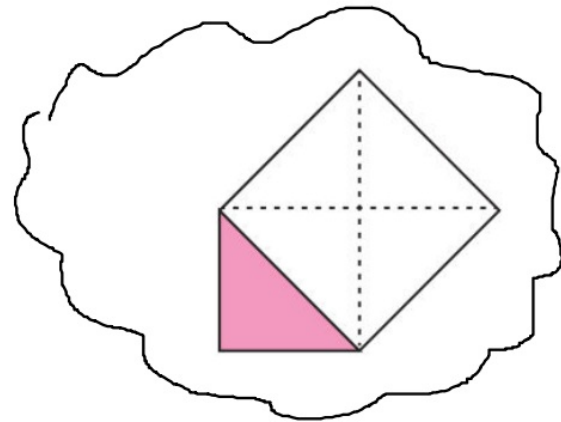


$$A_{\text{green}} + A_{\text{yellow}} = A_{\text{blue}}$$



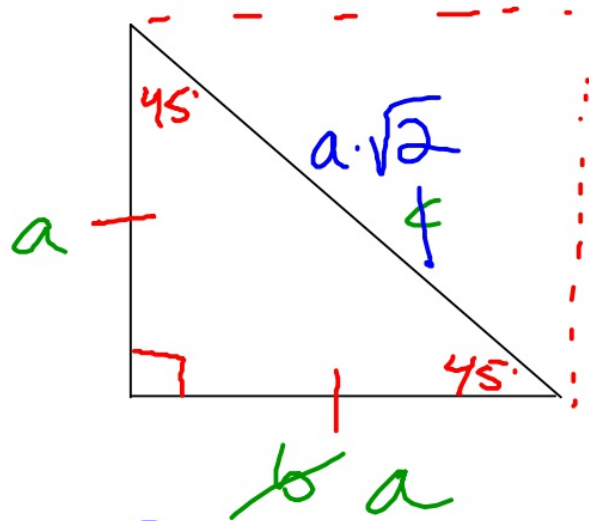
$$\cancel{f}a^2 + \cancel{f}b^2 = \cancel{f}c^2$$

$$a^2 + b^2 = c^2$$



Share with your face partner something you have learned so far today

Special Right Triangles (notes)



$$\sqrt{9} = 3$$

What do you suspect is true about this shape?

$$a^2 + b^2 = c^2$$

$$a^2 + a^2 = c^2$$

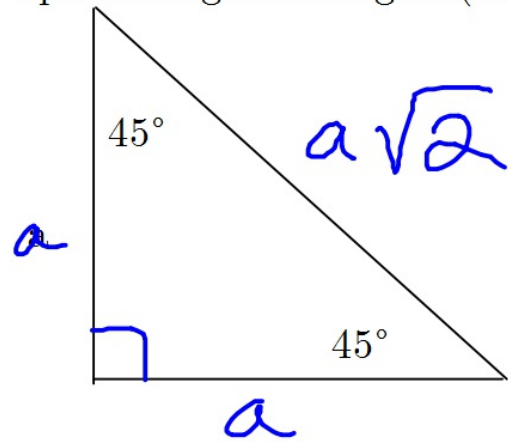
$$\sqrt{2a^2} = \sqrt{c^2}$$

$$\sqrt{2}a = c$$

$$a \cdot \sqrt{2} = c$$

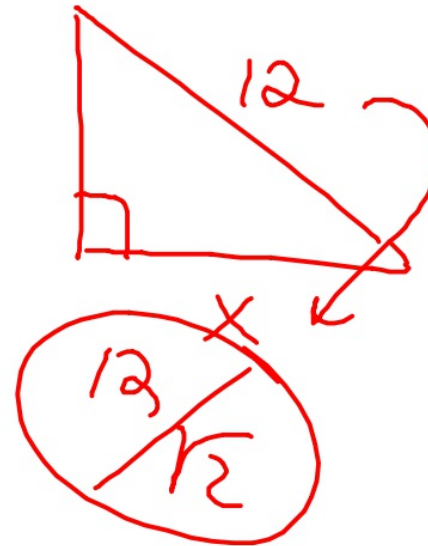
$$\begin{aligned} &\sqrt{18} \\ &\sqrt{2 \cdot 9} \\ &\sqrt{2 \cdot 3^2} \\ &\sqrt{2} \cdot \sqrt{3^2} \\ &\sqrt{2} \cdot 3 \end{aligned}$$

Special Right Triangles (notes)

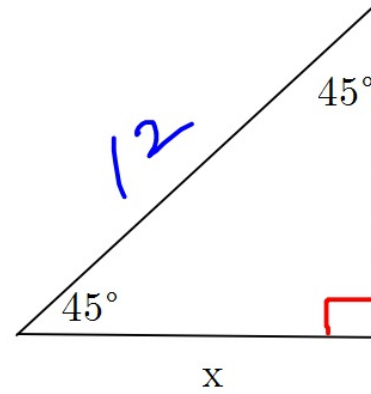
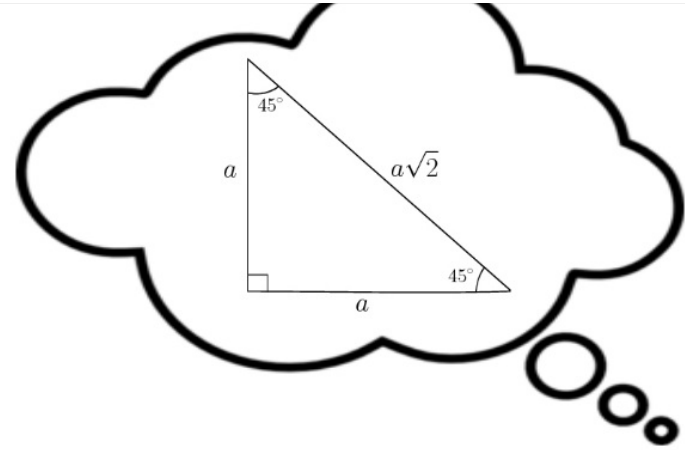
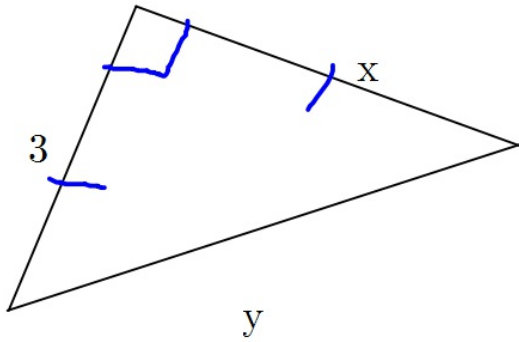


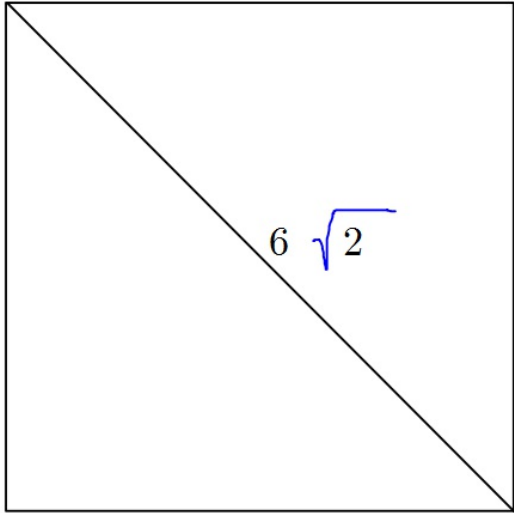
Find the length of the hypotenuse.

The 45-45-90 Pattern



Find the values of x and y .





Find the perimeter of the square.

HW:

p. 289 #4, 6, 7

p. 299 #2-4, ~~5~~

Assessment Thursday (will resemble this and previous hw!)