



Pythagorean Theorem Solver- #CSandMath

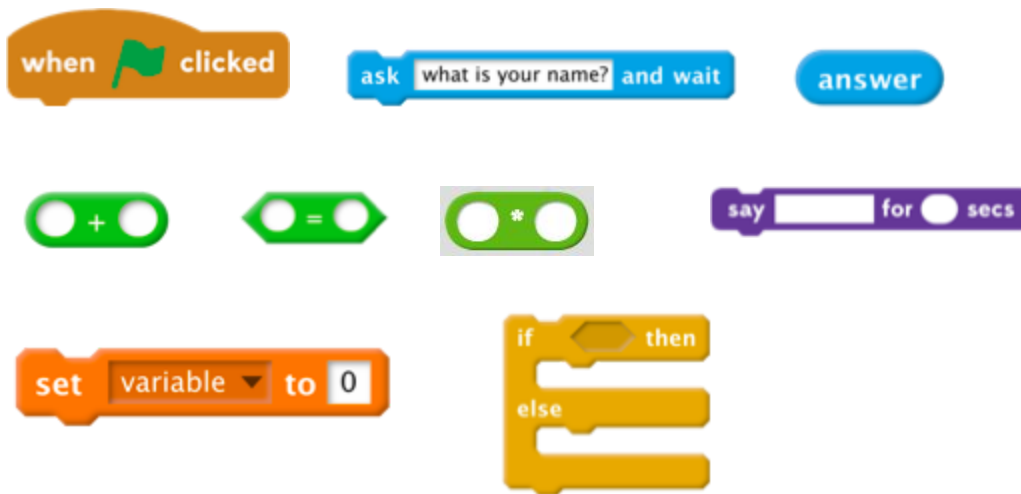
Project Goal:

Students will create a program that will solve for the missing side length of a right triangle. The player will choose which side of a right triangle they want to solve for, type in the side lengths they know, then the program will solve for the missing side of the triangle.

Standard:

CCSS.MATH.CONTENT.8.G.B.7 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.

Blocks:



Student Handout:

[Pythagorean Theorem Solver Introduction](#)

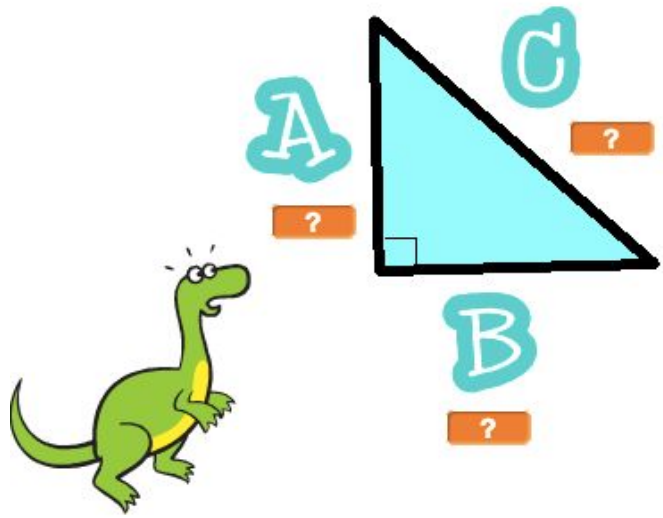
Teacher Guide:

[Step-by-Step Instructions](#)

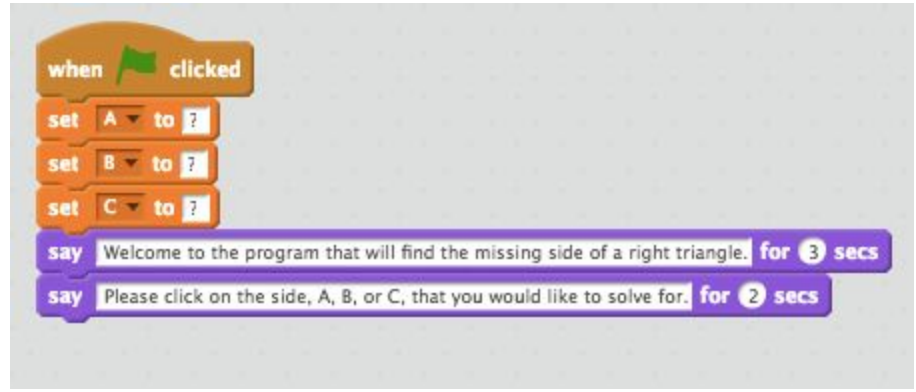
Solution:



The Main Screen may appear as follows:



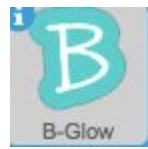
Inside of the Dinosaur Sprite:





Inside of the "A" Sprite:

```
when this sprite clicked
ask "What is side B equal to?" and wait
set B to answer
ask "What is side C equal to?" and wait
set C to answer
set A to sqrt of C * C - B * B
say join "Side A is equal to" A for 3 secs
```



Inside of the "B" Sprite:

```
when this sprite clicked
ask "What is side A equal to?" and wait
set A to answer
ask "What is side C equal to?" and wait
set C to answer
set B to sqrt of C * C - A * A
say join "Side B is equal to" B for 3 secs
```



Inside of the "C" Sprite:

```
when this sprite clicked
ask "What is side A equal to?" and wait
set A to answer
ask "What is side B equal to?" and wait
set B to answer
set C to sqrt of (A * A + B * B)
say join "Side C is equal to" C for 3 secs
```