



Speak Agent<sup>SM</sup>

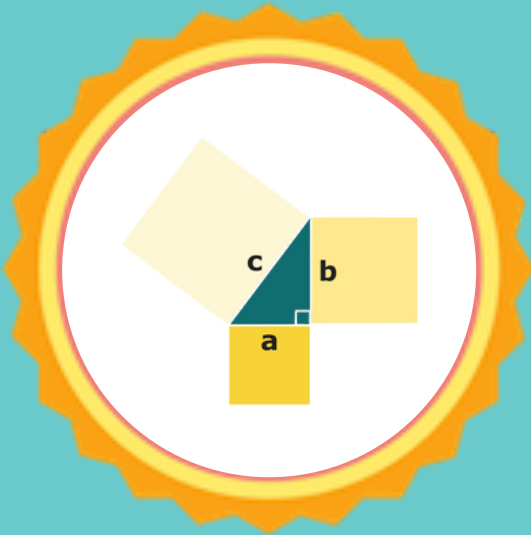
We speak the language of content.<sup>SM</sup>



# REAL-WORLD MATH

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## Pythagorean Theorem & Angles



*Psst! See this strategy in action here:*

[speakagent.com/strategies](https://speakagent.com/strategies)

# BUYING A NEW TV OR COMPUTER

MATH  
8



When you buy a TV or computer, the "screen size" on the box measures the diagonal line (C) from corner to corner.

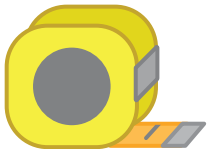
You can use Pythagoras' theorem to see what your TV's real "screen size" is.



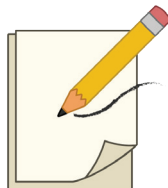
## TOOLS YOU NEED



Calculator



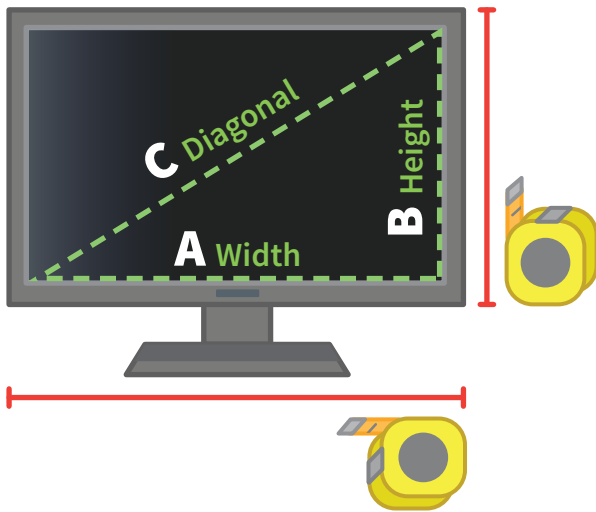
Measuring  
Tape



Paper &  
Pencil

## 1 MEASURE THE SIDES

- ▶ Measure your screen's width (A) and height (B).



## 2 CALCULATE

- ▶ Use the formula:

$$A^2 + B^2 = C^2$$



- ▶ Plug in your measurements of A and B.



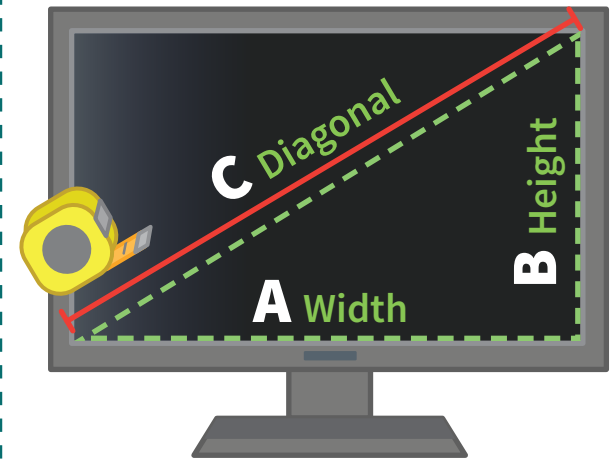
Don't forget to square them before adding!



Don't forget to take the square root of C2.

## 3 CHECK YOUR ANSWER

- ▶ Measure the diagonal (C) length.



## LEARNING GOALS

- ☐ Use Pythagoras' Theorem to find unknown side lengths in right triangles.

UNIT: Pythagorean Theorem and Angles

## BONUS QUESTIONS



## DISCUSSION

Do you feel it's misleading to use the diagonal length (C) to measure screen sizes?

Why or why not?

Why don't the people who market TVs and computers use width (A) for the screen size?

- ▶ Does your measurement equal the value you calculated for C?

If not, that's okay! Just check your work and try again until you get it.

# ABOUT SPEAK AGENT

This series includes activities that use real-world scenarios to connect learners to these five topics:

- Number Lines & Coordinate Planes
- Probability Trees
- Calculating Volume
- Pythagorean Theorem & Angles
- Linear Functions

Speak Agent Math+Language<sup>SM</sup> improves math performance for all K-12 students by empowering them to learn math through language. Students use the program to master key math concepts, develop reasoning and modeling skills, and to express mathematical thinking and ideas.

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