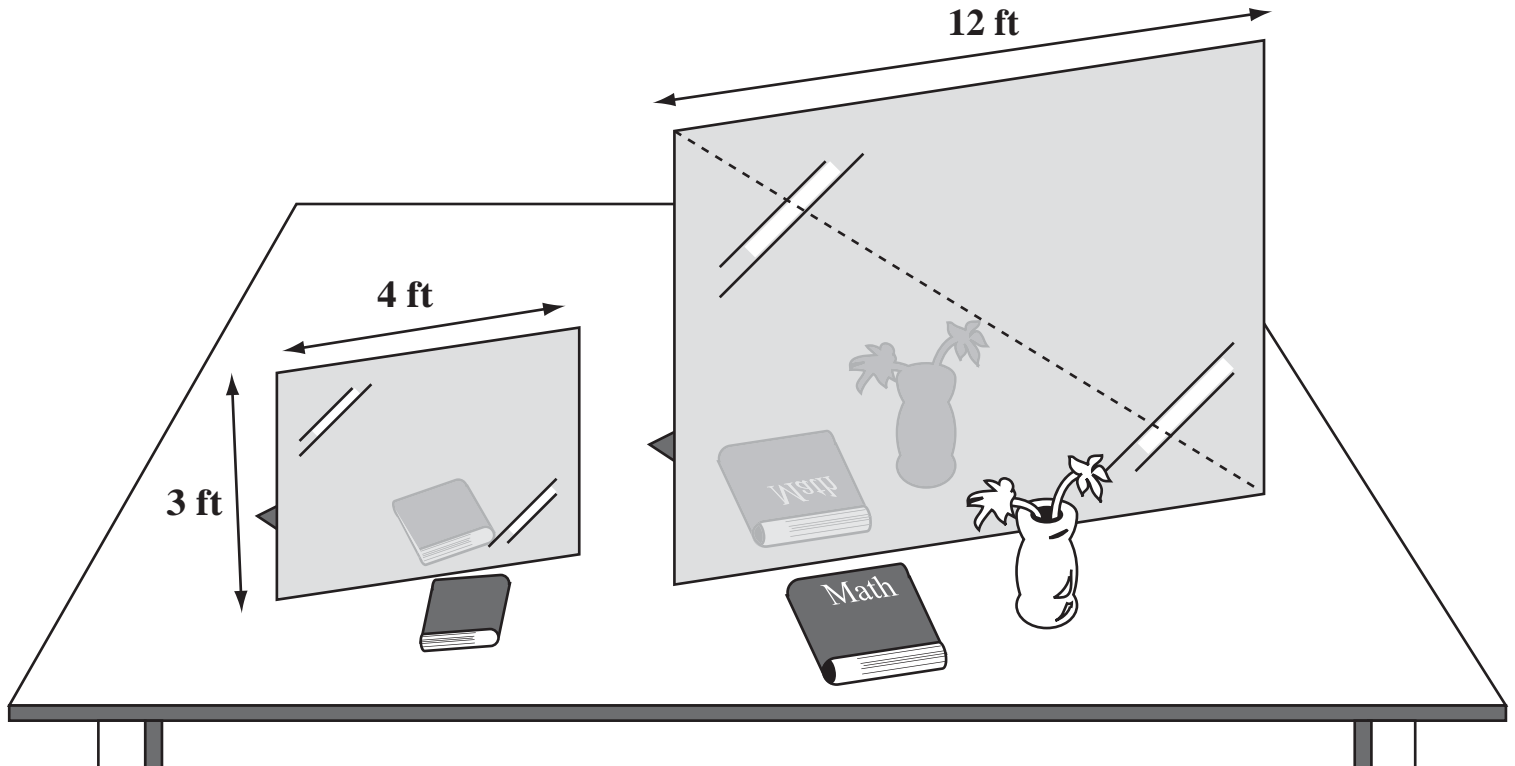


# COUNTDOWN CHALLENGE

## Similarity: *Challenging*

Two large mirrors are sitting on a table. The first mirror is 3 ft long, and 4 ft wide. The second mirror is known to be similar to the first, but the only dimension given is its width of 12 ft. Find the length of the diagonal of the large mirror shown in the diagram. Use words, symbols or diagrams to solve the problem. Also, explain in words the steps you took to solve the problem and why you took those steps.



1. What do you see?
2. Can you predict the question?
3. Read the question.
4. Does the word “similar” help us?
5. Can you set up a proportion when you have similar figures?
6. Will that be enough information to solve the problem?
7. If these are right triangles, there is another idea to use: the Pythagorean Theorem. What is the Pythagorean theorem?

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First I read the diagram **because** \_\_\_\_\_

Second I read the problem **because** \_\_\_\_\_

Next, I decided to use a proportion **because** \_\_\_\_\_

Then I used the Pythagorean theorem to find the diagonal **because** \_\_\_\_\_

My answer is \_\_\_\_\_ **because** \_\_\_\_\_

Finally, I checked my work because I wanted to get all 12 points.