

# MATH MAVEN'S MYSTERIES

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## The Case of the Incredible Shrinking Garden

Hello, super sleuths! I definitely need your math smarts to crack this latest case. It all started the other afternoon as I was walking down Main Street. The birds were chirping and the scent of spring flowers filled the air. Suddenly I noticed a noisy crowd gathering in the town park near the famous rose garden. There was a buzz of shock and dismay:

“Oh, it’s just awful! Our beautiful garden is disappearing!”

“Who could do such a thing?”

I pushed my way through the crowd and froze at the sight. Our precious rose garden that used to stretch 40 feet across the park was shrinking right before our eyes!

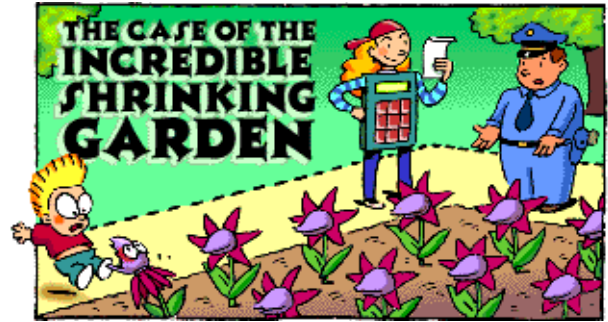
Just then Police Chief Billy Jay Cyprus ran over to me. “Math Maven, we need your help. I’m afraid this little prank is the work of that botanical rascal Ima Grubb.”

You see, Ima was the top plant specialist for the town park. But last month she ran an experiment in which she crossed Venus-flytraps with violets and created pretty little purple flowers that snapped at people passing by. Needless to say, Mayor Rhett Angle fired her immediately -- and rumor had it that Ima was out for revenge!

“We found this stuck on one of the rose thorns.” Chief Cyprus handed me a note written in flowery script:

SO MAYOR ANGLE REJECTED ME?  
“A DANGER TO THIS TOWN!” SAID HE.

A CLEVER PLAN I HAVE DEvised,  
TO CUT YOUR GARDEN DOWN TO SIZE.



Notes:

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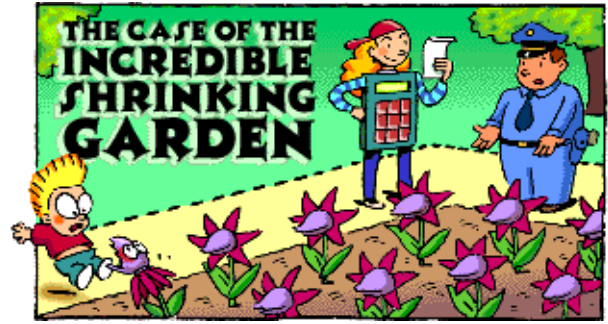
WHAT ONCE WAS 800 SQUARE FEET IN ALL,  
WILL SOON BE 100 TIMES AS SMALL!

TO SAVE YOUR BLOOMS, USE YOUR MIND:  
THE NEW DIMENSIONS YOU MUST FIND.

WRITE THE NUMBERS ON MY MAGIC HOE,  
AND WATCH YOUR PRECIOUS GARDEN  
GROW!

"I don't even know where to begin!" cried Chief  
Cyprus. "Math Maven, can you help me?"

"Don't worry, Chief," I said. "My Math Detectives  
will get right on it."



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## Solve the Mystery!

OK, Math Detectives. Your job is to find the new length and width measurements of the shrunken garden. It's the only way to restore the garden to its original dimensions. Remember, the garden is a rectangle. The area of a rectangle is found by multiplying its length by its width. The new area of the shrunken garden is 100 times smaller than the original area.

Here's a Math Maven Hint: Even though the garden shrank, the proportions did not change—so the length to width ratio is the same.

What are the dimensions of the garden after Ima Grubb shrank it?

Circle the correct answer:

- A. 1 foot wide, 8 feet long
- B. 2 feet wide, 4 feet long
- C. 5 feet wide, 2 feet long
- D. 20 feet wide, 40 feet long

Use this space to show your work: