Name:
Secret Mission: You have been hired to develop and evaluate robots' math skills. Sometimes, they give thorough, correct explanations. However, they occasionally go haywire.

## Robot Rita was given a math problem to solve.

At the science fair, Amy and Peter put together their own remote control vehicles. Mrs. Johnson is walking around in the back of the school to check them out.
"My model truck can go 16.6 mph , and its battery can last 34 minutes," says Amy.
"Well, my car can go 17.2 mph," interrupts Peter. "And it can last 30 minutes."
Mrs. Johnson decides to put them both on a track to test. She runs them both for 39 minutes without any additional charges. Which car will go farther? By how many miles?

## Robot Rita thinks this might be the answer:

Amy's truck can run for 34 minutes, so in those 39 minutes it takes 5 minutes to recharge. Its maximum mileage would be 34 minutes times $16.6 \mathrm{mph}=564.4 \mathrm{mph}$.
In those 39 minutes Peter's car would run for 30 minutes, so it takes 9 minutes to recharge. Its maximum mileage would be 30 minutes times $17.2 \mathrm{mph}=516 \mathrm{mph}$. Amy's truck would go 564.4-516 = (564.4-516=48.4) 48.4 miles farther. Answer: 48.4.
$\qquad$

# She is not sure that is correct, so she asked Robot Rob for help. This is how he tries to solve the problem. 



Neither Amy's nor Peter's vehicle will last for the full 39 minutes because Amy's vehicle will only last for 34 minutes and Peter's vehicle will only last for 30 minutes.

To calculate the distances each vehicle can travel, multiply the speed by the time (in hours).

Amy's vehicle will travel 16.6 mph times ( $34 \mathrm{~min} / 60 \mathrm{~min} / \mathrm{hour}$ ) $=9.39$ miles
Peter's vehicle will travel 17.2 mph times ( $30 \mathrm{~min} / 60 \mathrm{~min} / \mathrm{hour}$ ) $=8.6$ miles
So, Amy's vehicle will travel farther by 9.39 miles -8.6 miles $=0.79$ miles.

If you were the teacher, how would you grade Robot Rob's work? Explain and also make comments in Robot Rob's work.

Hint: EdHelper's answer pages gave this answer.
Amy's car will travel 9.406672 miles.
Peter's car will travel 8.6 miles.
BLANK:Amy's car will go farther by 0.806672 miles.

Name:
Remember how the robots gave solving that problem a try? Now it's your turn! Can you solve this cool math problem? Try to walk us through each step, and see if you can come up with an answer even better than the robots did! Is your answer the same as edHelper's?

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Name: $\qquad$
Now, it's your moment to shine! After observing the robots' attempts and fine-tuning their efforts, it's your turn to step up and give it a go!

At the science fair, Rose and Jacob put together their own remote control vehicles. Mrs. Young is walking around in the back of the school to check them out. "My model truck can go 11.6 mph , and its battery can last 31 minutes," says Rose. "Well, my car can go 12.5 mph," interrupts Jacob. "And it can last 25 minutes." Mrs. Young decides to put them both on a track to test. She runs them both for 36 minutes without any additional charges. Which car will go farther? By how many miles?

Name: $\qquad$
Robot was given a math problem to solve.

> Amy is trying to choose what kind of ice cream cone to buy. She can buy a sugar cone, a plain cone, or a waffle cone. She can choose vanilla, chocolate, or strawberry ice cream. How many choices does she have?


Robot wrote this program in Python to solve it.
\# Assign the number of choices for each category to its own variable num_of_cone_choices $=3$
num_of_flavor_choices = 3
\# Calculate the total number of choices by multiplying the numbers together num_of_total_choices = num_of_cone_choices * num_of_flavor_choices
\# Print out the number of choices Amy has
print('Amy has', num_of_total_choices, 'choices.')
Robot's program will print the answer to the math problem.
What will the program print out?

Hints and a Question
To multiply in Python * is used.
After Robot's program is done, the variable num_of_cone_choices will have a value in it. What value does it have?

Name:


Write as a decimal. Fifty thousandths
$7.3814 \times 10^{2}=$

Rewrite as an algebraic expression or equation.

Ten subtracted from a number is forty-five.
$6 \times 6 \times 6 \times 6 \times 6=x^{5}$
What is the value of $x$ ?
Circle the percentage that is closest to 16 out of 62 :
$0.15 \cdot 4=$ 34\%
53\%
5\%
86\%
$|62| \times[-43 \mid=$
$t-12+11=14$
What is the value of t ?

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