

Explain a real-world problem that you used math to solve. What mathematical expressions or equations did you use in your problem solving? Define your variables and explain your expression. After you've provided one worked out example, include a similar problem for your classmates to work.

Solution:

My real-world problem:

I have to move across country for a new job. Let's use Buffalo, NY to Sacramento, CA which is roughly 2500 miles of driving. How much money do I need to save for gas if the average fuel consumption per mile is 0.05 gallon and one gallon of fuel costs \$3.23.

Let x - amount of money you need to save, y - the number of gallons for driving this distance.

Equation for solving the problem:

$$y = 0.05 \frac{\text{gallon}}{\text{mile}} \cdot 2500 \text{ miles} = 125 \text{ gallons}$$

$$x = y \cdot 3.23 = 125 \text{ gallons} \cdot 3.23 \frac{\$}{\text{gallon}} = \$403.75$$

Answer: I need to save \$403.75 for fuel.

Similar problem:

How much money I need to save on gas if the distance between the cities decreased to 2000 miles because the construction of a new road, but the cost of one gallon risen to \$4.05?