For each question, you will need to assess what is being asked of you to find, to define an appropriate pair of variables, to write a pair of equations for the scenario, and then to solve your system. On your test, you may be asked any of these things. Check your answers.

1. Budget Rental allows for single, same-day truck rentals at the price $39.99 for the day, plus $0.89 for each mile driven. Enterprise allows for single, same-day truck rentals at the price of $75.18 for the day, plus $0.20 per mile driven. Elana and Dylan are moving and want to rent a truck to haul their belongings themselves. How many miles would they have to drive the truck for their move to make it worthwhile to rent from Enterprise instead of (the less-expensive, at first) Budget?

Let ___ =   Equation #1:
Let ___ =   Equation #2:

Answer:

2. When deciding which website to use to launch a charity's online silent auction, the committee director saw that she had two viable options. One website charges $400, plus 3% of the revenue made in the auction. The other website charges $125, plus 7% of the revenue made in the auction.   Clearly, the charity would be better off paying $125 upfront instead of $400. However, at a certain point, they would be better off using the other option. What amount of revenue does the charity need to raise in order for it to make sense to pay $400 upfront in exchange for paying just 3% of their revenue?

Let ___ =   Equation #1:
Let ___ =   Equation #2:

Answer:

3. (Written by former student Muhammed Diallo) There are 2 candy shops getting ready to sell boxes of candy for Valentine's Day. Store A charges $5.50 for the box and 75 cents for each piece of candy. Store B charges $10 for the box and 25 cents for each piece of candy. When will the price of the box and candy at both stores be equal because of the amount of candy purchased?

Let ___ =   Equation #1:
Let ___ =   Equation #2:

Answer:

4. Maia had 5 more dimes than nickels. In all, she had $2.30. How many of each coin did she have?

Let ___ =   Equation #1:
Let ___ =   Equation #2:

Answer:

5. I have a mess of change in my backpack. There are 3 more pennies than twice the number of quarters. I have $1.38 in pennies and quarters. How much of each type of coin do I have?

Let ___ =   Equation #1:
Let ___ =   Equation #2:
Answer: