Advanced Algebra with Trig
Worksheet on Word Problems for Systems

Name_____
Date_____CP_____

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 ___ =
Let ___ =

Equation #1:
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 ___ =
Let ___ =

Equation #1:
Equation #2:

Answer: