**Comparing Cab Fares**

Tonight you and three of your friends plan to go to a movie. But no one has a driver’s license and every family member is busy. You need to find transportation. After doing a Google search you find the following three companies.

|  |  |  |
| --- | --- | --- |
| **Speedy Cabs**  $0.70 per mile  $5.50 fuel surcharge | **On Time Cabs**  $1.50 per mile  No fuel surcharge | **Fast Cabs**  $0.95 per mile  $3.75 fuel surcharge |

1. Each of the cab companies lets extra passengers ride free. Write an expression for the cost of using Speedy Cabs for **a round trip.** Be sure to define your variables. Then do the same for the other two cab companies.
2. Use a website such as [www.randmcnally.com](http://www.randmcnally.com) to find the distance from your home to the nearest movie theatre. If you don’t have access to the internet, estimate the distance.
3. Which of the three companies would be the cheapest for you and your friends to take? Show why.
4. As an alternative, there is a bus route one block from your house with a stop at the movie theater. One way the fare is $1.50. Should you and your friends take the bus? Explain your decision.

Hasheem lives in Boston, which has the same three cab companies. The fees are the same, as well. Rather than trying to calculate how much it costs to use each company and comparing the prices, Hasheem thought he would just find when they all cost the same amount.

1. Help Hasheem determine how many miles will it take for **Fast Cabs** and **Speedy Cabs** to charge the same amount.
2. Using your work from problem 5, explain which cab company, **Fast Cabs** or **Speedy Cabs,** is better to use and when.
3. Hasheem now wants to know when **Fast Cabs** charges the same amount as **On Time Cabs**. Explain if one company is more economical to use over the other company and when.
4. Make one last calculation for Hasheem. Find when **Speedy Cabs** charges the same amount as **On Time Cabs**. Explain if one company is more economical to use over the other company and when.