Name: $\qquad$ Date: $\qquad$

## Travel Time

A travel agent plans trips for tourists from Chicago to Miami. He gives them three ways to get from town to town: airplane, bus, train. Once the tourists arrive, there are two ways to get to the hotel: hotel van or taxi. The cost of each type of transportation is given in the table below.

| Transportation Type | Cost |
| :--- | :---: |
| Airplane | $\$ 350$ |
| Bus | $\$ 150$ |
| Train | $\$ 225$ |
| Hotel Van | $\$ 60$ |
| Taxi | $\$ 40$ |

1. Draw a tree diagram to illustrate the possible choices for the tourists. Determine the cost for each outcome.
2. If these six outcomes are chosen equally by tourists, what is the probability that a randomly selected tourist travel in a bus?
3. What is the probability that a person's trip cost less than $\$ 300$ ?
4. What is the probability that a person's trip costs more than $\$ 350$ ?
5. If the tourists were flying to New York, the subway would be a third way to get to the hotel. How would this change the number of outcomes? Use the Fundamental Counting Principle to explain your answer.

Name: $\qquad$ Date: $\qquad$

## "Happy Birthday to You"

Andy has asked his girlfriend to make all the decisions for their date on her birthday. She will pick a restaurant and an activity for the date. Andy will choose a gift for her. The local restaurants include Mexican, Chinese, Seafood, and Italian. The activities she can choose from are Putt-Putt, bowling, and movies. Andy will buy her either candy or flowers.


1. How many outcomes are there for these three decisions? $\qquad$
2. Draw a tree diagram to illustrate the choices.

| Dinner for Two | Activity Cost for Two | Gift Cost |
| :--- | :--- | :--- |
| Mexican $-\$ 20$ | Putt-Putt - \$14 | Flowers $-\$ 25$ |
| Chinese $-\$ 25$ | Bowling - \$10 | Candy - \$7 |
| Italian $-\$ 15$ | Movies $-\$ 20$ |  |

3. If all the possible outcomes are equally likely, what is the probability that the date will cost at least $\$ 50$ ?
4. What is the maximum cost for the date?
5. What is the minimum cost for the date?
6. To the nearest dollar, what is the average cost for this date?
7. What is the probability that the date costs exactly $\$ 60$ ?
8. What is the probability that the date costs under $\$ 40$ ?
