Name: _____   Probability

# To Be Independent or Not!

Complete the table for each problem situation below.

	Circle the correct description.	Solution
A game is played with 2 fair spinners. One spinner has 4 sections numbered 1 through 4. The second spinner has 5 sections, each with a different color: red, blue, green, orange, and brown. What is the probability of spinning a 1 on the first spinner and the color green on the second spinner?	Independent Events Or Dependent Events	
Sherry had a bag containing 1 red, 3 green, 5 purple, and 6 blue tiles. What is the probability of drawing a green tile, not replacing it, and then drawing a tile other than red from the bag?	Independent Events Or Dependent Events	
To choose the team leaders for a math project, Mr. Garcia randomly drew the names of 3 students. If there were 9 girls and 6 boys in the drawing, what is the probability that he drew 3 girls' names?	Independent Events Or Dependent Events	

Complete the Venn diagram below.

Dependent Events   Independent Events
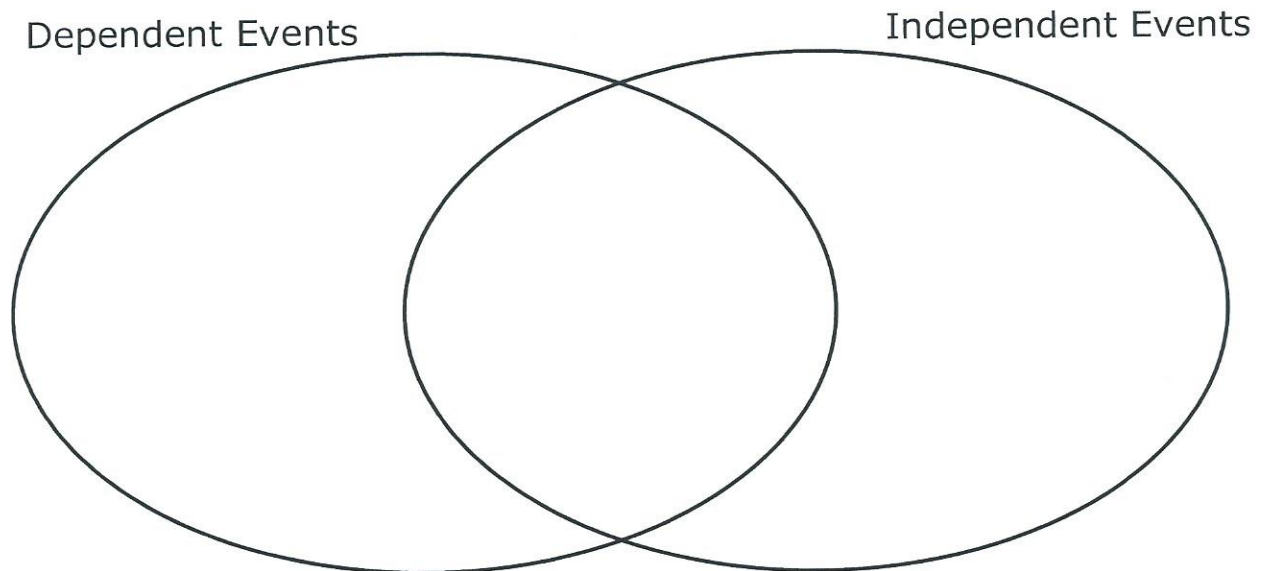
Probability Models

1. Duncan flips a fair coin and draws a card. The coin and cards are shown here.

J   Q   K   J   Q

Complete the area model to determine the possible outcomes when a fair coin is flipped and a card is drawn at random.

Cards

	J♦	Q♦	K♦	J♥	Q♥'
H					
T					

Coin

a. How many possible outcomes are there?

b. What is the probability of flipping a heads on the coin?

c. What is the probability of drawing a Jack?

d. What is the probability of flipping heads and drawing a Jack?

e. What is the probability of flipping tails and drawing a 10?

2. Ms. Johnson has the following cards:
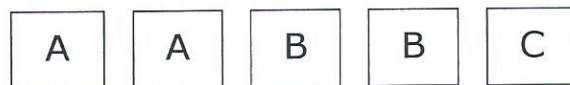
A   A   B   B   C

Situation A
The following area model can be used to find the probability of drawing a B card, replacing it, and then drawing an A card.

Second Draw

	A	A	B	B	C
A					
A					
B					
B					
C					

First Draw

a. How many possible outcomes are there?

b. The probability of drawing a B card, replacing it, and then drawing an A card is _____.

Situation B

The following area model can be used to find the probability of drawing a B card, not replacing it, and then drawing an A card.

Second Draw

	A	A	B	C
A				
A				
B				
B				
C				

(First Draw)

a. Why are there only four choices for the second draw?

b. How many possible outcomes are there?

c. The probability of drawing a B card, not replacing it, and then drawing an A card

   is _____.

d. Why are there fewer possible outcomes for Situation B than there are for Situation A?

Situation C

The following area model can be used to find the probability of drawing an A card, not replacing it, and then drawing a C card.

a. Complete the area model below to show the possible outcomes.

Second Draw

(First Draw)

b. The probability of drawing an A card, not replacing it, and then drawing a C card

   is _____.