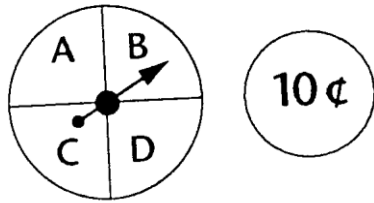
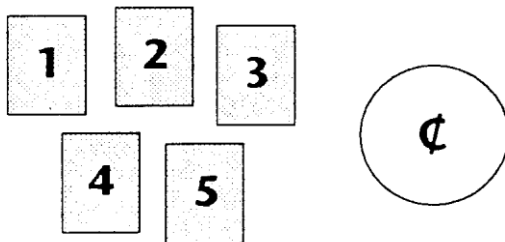


Draw the tree diagrams for the situations below and list all the possible outcomes.

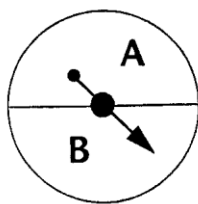
1. Spin the spinner and then toss the coin.



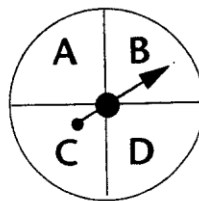
2. Choose a card and then toss the coin.



3. Spin spinner 1 and then spinner 2. Draw the tree diagram and find the probabilities as simplified fractions.



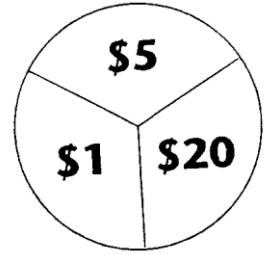
**spinner 1**



**spinner 2**

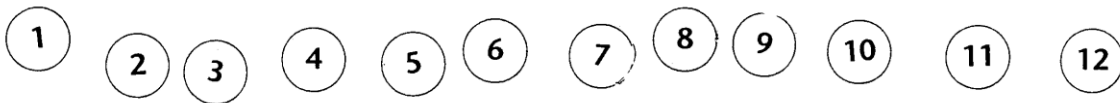
- |             |                                      |
|-------------|--------------------------------------|
| a) $P(A,A)$ | d) $P(A \text{ on the first spin})$  |
| b) $P(A,C)$ | e) $P(\text{letters match})$         |
| c) $P(C,A)$ | f) $P(\text{letters are different})$ |

4. Bonnie has won a contest. To determine how much she has won, she spins the spinner shown twice. She wins the sum of her two spins.



- a) What is the largest amount of money she can win?
- b) What is the smallest amount of money she can win?
- c)  $P(\text{win more than } \$5)$
- d)  $P(\text{win } \$6)$
- e)  $P(\text{win less than } \$50)$

5. A jar contains disks numbered from 1 - 12. A disk is drawn at random. Three players are playing the following games. Find the  $P(A \text{ wins})$ ,  $P(B \text{ wins})$  and  $P(C \text{ wins})$  for each game.



- a) Game one: A wins if the disk is less than 8, B wins if the disk is more than 8 and C wins otherwise.
- b) Game two: A wins if the disk is more than 6, B wins if the disk is less than 4 and C wins otherwise.
- c) Game three: A wins if the disk is a multiple of 3, B wins if the disk is a multiple of 5 and C wins otherwise.
- d) Game four: A wins if the disk is 12, B wins if the disk is one digit and C wins otherwise.

6. The Aardvarks are playing the Baboons in a best of three game series. The probability of the Aardvarks winning a game is  $\frac{4}{5}$ . Draw the tree diagram and find the probabilities.

a)  $P(\text{Aardvarks win in 2 games})$

b)  $P(\text{Aardvarks win in 3 games})$