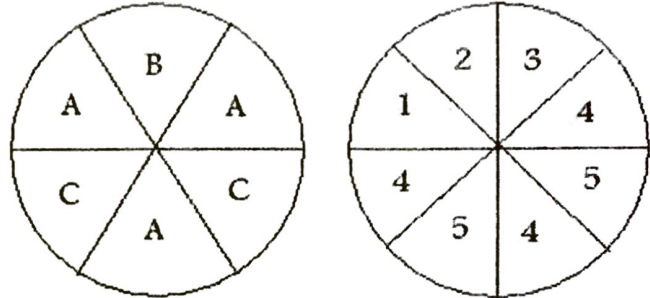**HW 9-3**

Int 1   **Compound Probability**   **Unit 9**

Refer to the spinners on the right to find the probability of each outcome. Write your answers as SIMPLIFIED fractions.

  1) P(A and 1) = $\frac{1}{16}$

  2) P(C and 2)

7) P(a consonant and an odd number)

$$\frac{1}{4}$$

  3) P(B and 4) = $\frac{1}{16}$

8) P(a vowel and a 5)

  4) P(A and 3) = �

  5) P(C and 4) = $\frac{1}{8}$

9) P(a consonant and a prime number)

$$\frac{1}{4}$$

  6) P(B and 5)

10) P(a vowel and a number less than 4)

In a bag, there are 5 red marbles, 6 white marbles, 3 blue marbles, and 7 green marbles. Once a marble is selected, **it is replaced**. Find the probability of each outcome. Write your answers as fractions.

  11) a blue marble and then a green marble

$$\frac{1}{21}$$

  13) a red marble three times in a row

$$\frac{125}{9,261}$$

  12) a blue marble and then a red marble

  14) P(white, then blue, then white)

In a bag, there are 5 red marbles, 6 white marbles, 3 blue marbles, and 7 green marbles. Once a marble is selected, **it is NOT replaced**. Find the probability of each outcome. Write your answers as fractions.

15) 2 red marbles in a row

$$\frac{20}{420} = \frac{1}{21}$$

17) P(blue, then red, then green)

$$\frac{105}{7,980} = \frac{1}{76}$$

16) 2 green marbles in a row

18) P(blue, then blue, then blue)

For each game, find the indicated probability.

19) To win a carnival prize, you need to choose one of 3 doors labeled 1 through 3. Then you need to chose a red, yellow, or blue box behind each door. What is probability that the prize is in the blue or yellow box behind door 2?

$$\frac{2}{9}$$

Mr. and Mrs. Romero are expecting triplets. Suppose the chances of each child being a boy is equally likely. Write your answers as SIMPLIFIED fractions.

20) Create a tree diagram to see all possible combinations of the genders of their triplets.

21) Find the P(all three children will be boys)

$$\frac{1}{8}$$

22) Find the P(at least one is a boy and one is a girl)

23) Find the P(two boys and one girl)

$$\frac{3}{8}$$

24) Find the P(at least two girls)

EXTRA CREDIT: Write your answers as simplified fractions.

25) Alana tosses 2 number cubes. She wins if she rolls doubles of any number. Find the probability that she will win.

26) Ming rolls a number cube, tosses a coin and chooses a card from two cards marked A or B. If an even number and heads appears, Ming wins no matter which cards is chosen. Otherwise Lashonda wins. Find P(Ming wins).