

**1. Determine the sample space by listing the elements of the sample space in set notation and then determine the number of possible outcomes in that sample space.**

a) The rolling a 8 sided (D8) die.

\_\_\_\_\_

b) The possible genders of the two children in a family.

\_\_\_\_\_

c) A bag of marbles with 3 Red, 2 Green and 5 Yellow.

\_\_\_\_\_

d) The sum of two dice (D6).

\_\_\_\_\_

e) The letters in the word, Golf.

\_\_\_\_\_

f) The digits in the number, 13430

\_\_\_\_\_

**2. Determine whether the sample spaces in question #1 are uniform or not.**

a) Uniform or Not Uniform

b) Uniform or Not Uniform

c) Uniform or Not Uniform

d) Uniform or Not Uniform

e) Uniform or Not Uniform

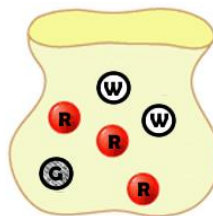
f) Uniform or Not Uniform

**3. Determine the sample space from the diagram - list the elements of the sample space in set notation.**

a) the numbers on the spinner



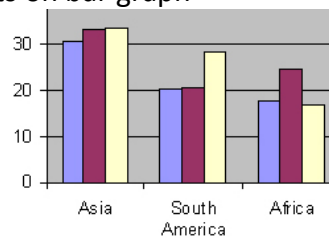
b) the marbles in the bag



d) the text on the tiles



e) continents on bar graph



4. Sally is told that the sample space is the factors of 25. She thinks this is easy and quickly lists, {1, 5, 5, 25}. Is this correct? Explain.

5. Jeff is told to list the sample space for the marble bag which contains 3 blues and 2 reds. He lists {Blue, Red} as the sample space and then says that they are equally likely because you can either get blue or red. Is this correct? Explain.

6. Create a tree diagram for the following. Determine the elements and size of the sample space and whether it represents uniform or non-uniform probabilities.

a) the possible genders of having three children

b) picking a marble from a bag #1 with 2 green and 1 red marble and then picking from bag #2 with 1 orange and 3 purple marbles.

Size = \_\_\_\_\_ Uniform or Not Uniform

Size = \_\_\_\_\_ Uniform or Not Uniform

c) selecting an outfit at random from 3 shirts (v neck, collar, and t-shirt) and 2 pants (jean and dockers).

d) flipping a coin three times

Size = \_\_\_\_\_ Uniform or Not Uniform

Size = \_\_\_\_\_ Uniform or Not Uniform

7. Jeff and Sally are playing Paper – Scissors - Rock. It is a game where each person displays a symbol (flat hand (paper), split finger (scissors) or fist (rock)) at the exact same time. The winner is determined by paper beats rock, scissors beat paper, and rock beats scissors. Use the table to display the sample space for the game.

	Sally (Rock)	Sally (Paper)	Sally (Scissors)
Jeff (Rock)			
Jeff (Paper)			
Jeff (Scissors)			

a) How many elements in this sample space? \_\_\_\_\_

b) How many ways can Jeff win? \_\_\_\_\_