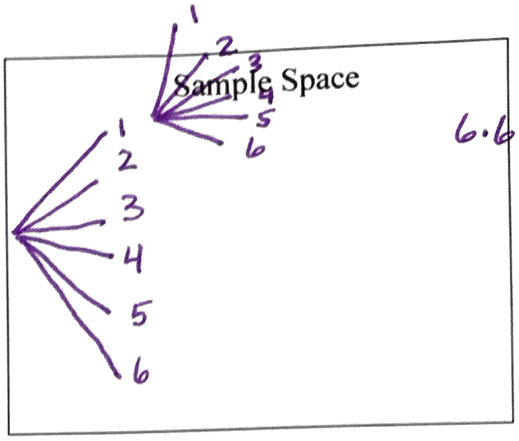
NAME _____ HW #____

1. Suppose you roll two number cubes.



6·6 = 36

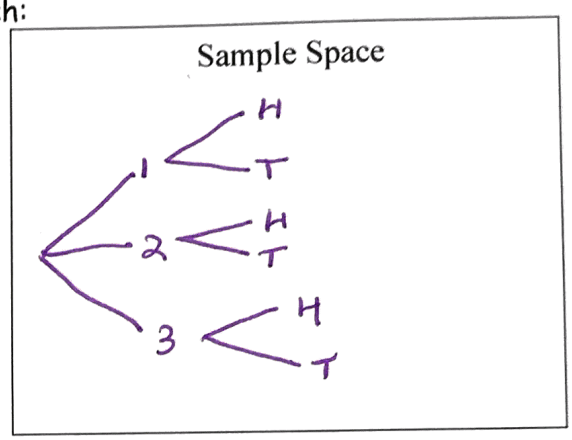
   a. What is the probability you get a 4 and a 6?

$\frac{2}{36}$

   b. What is the probability you get two 5's?

$\frac{1}{36}$

2. You spin the spinner and flip a coin. Find the probability of each:



   a. spinning a 1 and flipping heads $\frac{1}{6}$

   b. Spinning an odd number and flipping heads $\frac{2}{6}$

   c. Spinning an even number and flipping tails or heads $\frac{2}{6}$

   d. Not spinning a 3 and flipping tails $\frac{2}{6}$

   e. Spinning a prime number and flipping heads $\frac{2}{6}$

3. When taking a multiple choice test, you randomly guess the answers to two questions. Each question has three choices: A, B or C.

3 · 3 = 9

   a. What is the probability you guess the correct answers to both questions?

$\frac{1}{9}$

   b. Suppose you can eliminate one of the choices for each question. How does this change the probability of guessing the correct answers?

2 · 2 = 4 $\frac{1}{4}$

4. You have been assigned a 9-digit ID number

   a. Why should you use the fundamental counting principle instead of a tree diagram to find the total number of possible ID numbers? It would be a huge tree.

   b. How many different ID numbers are possible?

10 10 10 10 10 10 10 10 10

1,000,000,000 options