ANSWER KEY

Homework # 2

1. A couple plans to have three children. Find the probability that the children are

   a. all boys $= \frac{1}{8}$

   b. all girls $= \frac{1}{8}$

   c. two boys or two girls $= \frac{6}{8}$

   d. at least one child of each sex. $\frac{6}{8}$

8 WAYS
BBB
BGG
BGB
GBB
GBG
GGB
GBB
GGG

2. In a statistics class there are 18 juniors and 10 seniors; 6 of the seniors are females, and 12 of the juniors are males. If a student is selected at random, find the probability of selecting

	J	S	
F	6	6	12
M	12	4	16
	18	10	28

   a. a junior or a female
   24/28

   b. a senior or a female
   16/28

   c. a junior or a senior
   28/28

3. If a single die is rolled one time, find the probabilities of getting

   a. a 4 $1/6$

   b. an even number $= 3/6$

   c. a number greater than 4 $= 2/6$

   d. a number less than 7 $= 6/6$

   e. a number greater than 0 $= 6/6$

   f. a number greater than 3 or an odd number $= 5/6$

   g. a number greater than 3 and an odd number $= 1/6$

4. Abby, Barbara, Carla, Dan, and Ennis work in a firm's public relations office. Their employer must choose two of them to attend a conference in Chicago. To avoid unfairness, the choice will be made by drawing two names from a hat. (This is a sample size of 2.)

   a. Write down all possible choices of two of the five names. For convenience, you can simply use the first letter of their names.

AB BC CD DE
AC BD CE
AD BE
AE

   b. The random drawing makes all choices equally likely. What is the probability of each choice?

$\frac{1}{10}$

   c. What is the probability that neither of the two men (Dan and Ennis) is chosen?

$\frac{3}{10}$