MATH 140 SUMMER 2012 WORKSHEET 1 ¾ NAME:_____
(please print legibly)

Please determine the following:

A. Which of the following experiments has a well defined sample space (that means satisfies the axioms of probability)?
B. Which of the following experiments is an applied example creating a Bernoulli random variable?

Experiment 1: Suppose we have an urn with 4 red, 3 white, and 2 blue balls. Success is defined as drawing a red ball. Close your eyes, and draw a ball. Note the colour and we wish to determine the probability we pick a red ball.

Experiment 2: : Suppose we have an urn with 4 red, 3 white, and 2 blue balls. Success is defined as drawing a red ball. Close your eyes, and draw a ball. Note the colour. Put everything back. Draw again a ball. Note the colour. Having noted the first and second draw of the balls we wish to determine the probability we pick a red ball first and a non-red ball second.

Experiment 3: : Suppose we have an urn with 4 red, 3 white, and 2 blue balls. Success is defined as drawing a red ball. Close your eyes, and draw a ball. Note the colour. Draw another ball. Note the colour. Having noted the first and second draw of the balls we wish to determine the probability we pick a red ball first and a non-red ball second.

Experiment 4: Suppose we have a coin that is fair and balanced. Success is defined as flipping a tails. Flip the coin five times and note each time the flip (heads or tails. We note the number of tails and wish to determine the probability we get at least 2 tails out of the 5 tosses.

Experiment 5: Suppose we have a standard bridge deck of 52 cards. Success is defined as picking a king. Pick a card. We note the card and wish to determine the probability we get a king.

Experiment 6: Suppose we have a standard bridge deck of 52 cards. Success is defined as picking a king or a spade. Pick a card. We note the card and wish to determine the probability we get a king or a spade.

Experiment 7: Suppose we have a standard bridge deck of 52 cards. Success is defined as picking a king and a spade. Pick a card. We note the card and wish to determine the probability we get a king of spades.