

Name: \_\_\_\_\_ Math 130 Day 4 In Class Worksheet

Date: \_\_\_\_\_ The Meaning of Probability / Compound Events

1.

a) The probability that a TV commercial last longer than 20 seconds is 7.2%. What does this probability mean?

b) If you watch 3,000 random TV commercials, how many will last longer than 20 seconds?

c) If you watch infinitely many random TV commercials, what percent of those commercials will last longer than 20 seconds?

2.

a) The probability that a baseball game will go to extra innings is 9%. What does this probability mean?

b) If you watch 162 baseball games, how many will go to extra innings?

c) If you watch infinitely many baseball games, what percent of the games will go to extra innings?

3.

Experiment

Spin the spinner shown below once



Events

$A$  = The spinner lands on a red section

$B$  = The spinner lands on a blue section

$C$  = The spinner lands on an even number

$D$  = The spinner lands on a multiple of 3

$E$  = The spinner lands on a prime number

$F$  = The spinner lands on a red odd number

$G$  = The spinner lands on a number greater than 5

Find

$A \cup B$ ,  $A \cup C$ ,  $C \cap G$ ,  $B \cap D$ ,  $\bar{B}$ ,  $\bar{E}$

Question:

Are the events  $A$  and  $B$  disjoint? How about  $C$  and  $E$ ?

4.

Experiment

Randomly select a person who lives in the United States

Events

$A$  = The selected person owns a pet

$B$  = The selected person wears eyeglasses

$C$  = The selected person has brown eyes

$D$  = The selected person has green eyes

Questions:

a) Are the events  $A$  and  $B$  disjoint? Explain!

b) Are the events  $C$  and  $D$  disjoint? Explain!

c) Describe in words the people in event  $A \cup C$

d) Describe in words the people in event  $B \cap D$

e) Describe in words the people in event  $\bar{A}$