

Lab Assignment 3.1

Name: _____ Date: _____ Row: _____

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1. The sample space S is the whole numbers starting at one and less than 20.

a. $S =$

Let A = the even numbers, Let B = numbers greater than 13.

b. $A \cap B =$

c. $P(A) = P(B) =$

d. $A \cap B = P(A \cap B) =$

e. $A \cup B = P(A \cup B) =$

f. $A' = P(A') =$

g. $P(A) + P(A') =$

h. $A \text{ GIVEN } B \ P(A|B) =$

i. $B \text{ GIVEN } A \ P(B|A) =$

2. A box is filled with several party favors. It contains 12 hats, 15 noisemakers, 10 finger traps, and 5 bags of confetti.

- Let H = the event of getting a hat.
- Let N = the event of getting a noisemaker.
- Let F = the event of getting a finger trap.
- Let C = the event of getting a bag of confetti.

a. $P(H) =$

b. $P(N \cup F) =$

c. $P(C') =$

3. You are rolling a fair, six-sided number cube. Let E = the event that it lands on an even number. Let M = the event that it lands on a multiple of three.

a. What does $P(E|M)$ mean in words?

b. What does $P(E \cup M)$ mean in words?

4. What is the sum of the probabilities of an event and its complement?

5. What is the probability of drawing a club in a standard deck of 52 cards?

6. What is the probability of rolling a prime number of dots with a fair, six-sided die numbered one through six?

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