

Due: Today

- (1) Find each of the probability that you roll two dice and get . . .
 - a. a 5 or 6: _____
 - b. a number greater than 9: _____
 - c. doubles: _____
 - d. a number divisible by 4: _____
 - e. an odd number: _____

- (2) Of the 55 students who responded to a survey question about ethnicity, 20 reported that they are of Irish heritage and 14 reported Italian. Seven students reported that they are of both Irish and Italian heritage. If a student is selected at random, what is the probability that he or she is either Italian or Irish? _____

- (3) In how many different arrangements can 12 people sit in a circle? _____

- (4) The most recent unemployment rate for Allegheny County was 5.4% in April, 2016.
 - a. What is the probability that ten randomly selected county residents are all employed?
 - b. What is the probability that ten randomly selected county residents are all unemployed?
 - c. What is the probability that five of ten randomly selected county residents are all employed?
 - d. What is the probability that one of ten randomly selected county residents is employed?
 - e. If 100 county residents are selected at random, how many should be expected to be employed?

- (5) The mean lifetime of a manufacturer's wristwatch is 25 months with standard deviation of 5 months. If this variable is distributed normally, for how many months should the manufacturer use for a guarantee if they hope to refund no more than 10% of the watches? _____

- (6) The number of text messages made or received during class by college students is a normally distributed variable with mean 6.83 and standard deviation 2.35. What is the probability that a randomly selected college student sends or receives eight or more messages during a class?