Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Hour\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |
| --- |
| Probability Practice |

|  |  |
| --- | --- |
| 1. Suppose you select a number at random from the sample space. {-3,-2,-1,0,1,2,3,4}. Find each probability.  a) P(a positive number) b) P(a number less than 2)  c) P(an even number) d) P(a multiple of 3) | |
| 2. You have won five games of checkers and your opponent has won three. What is the experimental probability of your winning? | 3. A bag contains 12 red, 15 green, 10 yellow, 25 purple, and 2 black blocks. Find the theoretical probability for one block selected at random.  a) P(green)  b) P(black or not red)  c) P(red or yellow) |
| 4. Find each probability for choosing a letter at random from the word *mathematics.*  a) P(e) b) P(a letter that occurs more than once)  c) P(s or t) d) P(vowel) | |
| 5. Independent event. Suppose you have five books in your book bag. Three are novels, one is a biography, and one is a poetry book. Today you grab one book out of your bag without looking, and return it later. Tomorrow you do the same thing. What is the probability that you grab a novel both days? | |
| 6. S & T are independent events. Find P(S and T)  a) P(S)=, P(T)=  b) P(S)=, P(T)=  c) P(S)=, P(T)=  d) P(S)=, P(T)= | |
| 7. Independent event. Bag A contains 9 red marbles and 3 green marbles. Bag B contains 9 black marbles and 6 orange marbles. Find the probability of selecting one green marble from bag A and one black marble from bag B. | |
| 8. Independent event. Two seniors, one from each government class are randomly selected to travel to Washington, D.C. Wes is in a class of 18 students and Maureen is in a class of 20 students.  Find the probability that both Wes and Maureen will be selected. | |
| 9. Which of the following in NOT an example of independent events? EXPLAIN!!  a. rolling a die and spinning a spinner  b. tossing a coin two times  c. picking two cards from a deck with replacement of first card  d. selecting two marbles one at a time without replacement | |
| 10. A spinner, numbered 1–8, is spun once. What is the probability of spinning…  a) an EVEN number?    b) a multiple of 3?  c) a PRIME number?  d) 9? |  |
| 11. One card is drawn from a well-shuffled deck of 52 cards. What is the probability of drawing…  P(ace) = \_\_\_\_\_\_\_\_ P(K, J, Q) = \_\_\_\_\_\_\_\_\_  P(a red 10) = \_\_\_\_\_\_\_\_ P(NOT a diamond) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
| 12. One of these cards will be drawn without looking.  P(J) = \_\_\_\_\_\_\_\_\_ P(a number) = \_\_\_\_\_\_\_\_\_ | |