Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #’: \_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_

**10.5A Independent and Dependent Events\_Classwork**

*Objective: identify independent and dependent events; use formulas to find probabilities of independent and dependent events (CC.SS.7.SP.8a and CC.SS.7.SP.8b. MP3 Construct Viable Arguments)*

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| **Independent Events**  Whatever happens in one event has absolutely nothing to do with what will happen next because:  1) The two events are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  2) You repeat the experiment \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  3) You repeat the same activity, but you \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Dependent Event**  The result of the second event (pick) will change because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Are these dependent or independent events?**   1. Tossing two dice and getting a 6 on both of them.   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   1. You have a bag of marbles: 3 blue, 5 white, and 12 red. You choose one marble out the bag, look at it then put it back. Then you choose another marble.   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   1. You have a basket of socks. You need to find the probability of pulling out a black sock and its matching black sock without putting the first sock back.   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   1. You pick the letter Q from a bag containing all the letters of the alphabet. You do not put the Q back in the bag before you pick another tile.   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Rewrite each question as a probability notation.**   1. What is the probability of tossing two dice and getting a 6 on both of them? 2. You have a bag of marbles: 3 blue, 5 white, and 12 red. You choose one marble out the bag, look at it then put it back. Then you choose another marble. What is the probability of picking a red and white? 3. You have a basket of socks. You need to find the probability of pulling out a black sock and its matching black sock without putting the first sock back. 4. You pick the letter Q from a bag containing all the letters of the alphabet. You do not put the Q back in the bag before you pick another tile. What is the probability of getting a Q first and a T second? |

Watch the video and take notes: <https://www.youtube.com/watch?v=gNRT2KoyT7U>

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| **Problem 1:** Using the bag of marbles on the left, what is the probability of pulling a white marble two times in a row?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   |  |  | | --- | --- | | When you put 1st marble BACK IN  (Independent Events) | When you KEEP 1st marble  (dependent Events) | |
| **Problem 2**: Using the bag of marbles on the left, what is the probability of pulling a black marble two times in a row?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   |  |  | | --- | --- | | When you put 1st marble BACK IN  (Independent Events) | When you KEEP 1st marble  (dependent Events) | |
| **Problem 3**: Using the bag of marbles on the left, what is the probability of pulling black marble, and then a white marble?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   |  |  | | --- | --- | | When you put 1st marble BACK IN  (Independent Events) | When you KEEP 1st marble  (dependent Events) | |
| **Problem 4**: Using the bag of marbles on the left, what is the probability of pulling a white marble, then a striped marble?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   |  |  | | --- | --- | | When you put 1st marble BACK IN  (Independent Events) | When you KEEP 1st marble  (dependent Events) | |

HW: textbook- BIM pg 433\_#3-12 ALL