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?
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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? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| When you put 1st marble BACK IN(Independent Events) | When you KEEP 1st marble (dependent Events) |

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| **Problem 2**: Using the bag of marbles on the left, what is the probability of pulling a black marble two times in a row? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| --- | --- |
| When you put 1st marble BACK IN(Independent Events) | When you KEEP 1st marble (dependent Events) |

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| **Problem 3**: Using the bag of marbles on the left, what is the probability of pulling black marble, and then a white marble?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| --- | --- |
| When you put 1st marble BACK IN(Independent Events) | When you KEEP 1st marble (dependent Events) |

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| **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) |

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