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| **Exploring Independent and Dependent Events** | | | |
| Understands and explains independent events  The outcome of one event does not affect the outcome of the other event, for example, removing a marble from a bag, then replacing it before a second marble is taken. | Identifies the sample space for two independent events    A marble is taken from the bag, replaced, and then a second marble is taken.  What is the sample space? | Understands and explains dependent events and their sample space  The outcome of one event affects the outcome of the other event, for example, removing a marble from a bag, and not replacing it before a second marble is taken.      The sample space is:  Y, R; Y, B; R, Y; R, B; B, Y; B, R | Determines the probability  of two events    For the two independent events, the theoretical probability of picking red  and blue marbles is:  For the two dependent events,  the probability of picking red and  blue marbles is: = |

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| **Observations/Documentation** | | | |
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