11.3 Probability of Independent Events Day 2

TSW understand concept of probability

- *understand independent events
- *use the multiplication rule and the addition rule of probability to solve problems with independent events

Use the Multiplication Rule of Probability to Solve Problems with Independent Events With Replacement

Create a tree diagram to represent the independent events that form the compound event and the corresponding probabilities after replacement

Example 7 Solve probability problems involving independent events with replacement.

A jar contains 8 green marbles and 4 red marbles. One marble is randomly drawn and the color of the marble is noted. The marble is then put back into the jar and a second marble is randomly drawn. The color of the second marble is also noted.

a) Find the probability of first drawing a green marble followed by a red marble.

- b) Find the probability of first drawing a red marble followed by a green marble.
- c) Find the probability of drawing two green marbles.

Guided Practice

Solve. Show your work.

- 2 In a bag, there are 9 magenta balls and 1 orange ball. Two balls are randomly drawn, one at a time with replacement.
 - a) Find the probability of drawing two magenta balls.

b) Find the probability of drawing an orange ball followed by a magenta ball.

c) Find the probability of drawing an orange ball both times.