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.

