NAME

Module 20 Solving Problems Using Probability, Statistics, and Discrete Math
Lesson 3 Solving Advanced Probability Problems

guided notes

Lesson Objectives

- Find the probability of independent events.
- Find the probability of dependent events.

Two events are **independent** events if the occurrence of one event does not affect the probability of the other.

For independent events A and B, P(A and B) = **P(A) · P(B)**

1. A coin is tossed, and a fair die is rolled. Find the probability of getting heads and rolling an even number. $\frac{1}{4}$

2. Two letters from the word "apple" are selected at random *with* replacement. What is the probability of selecting two "p's"? $\frac{4}{25}$

Dependent events are events in which the occurrence of one event does affect the probability of the other.

For dependent events A and B, P(A then B) = **P(A) · P(B after A)**

3. The yearbook staff randomly picks pictures from a box for a slide show presentation for the senior class. The box contains 25 color photos and 50 black and white photos. What is the probability of getting a black and white photo and then a color photo if the first photo is not replaced? $\frac{25}{111}$

4. Two letters from the word "apple" are selected at random *without* replacement. What is the probability of selecting two "p's"? $\frac{1}{10}$