Name: _____ Date: _____

> <u>**Today's Learning Goal:**</u> *At the end of today's lesson, you should be able to identify whether an event is independent or dependent and find the probability of an independent and dependent event.*

Two events are **independent events** if _____

_____.

Two events are **dependent events** if _____

_____.

Examples: *Tell whether the events are independent or dependent. Explain your answer.*

A. You flip heads on one coin and tails on another coin.

B. Your teacher chooses one student to lead a group, and then chooses another student to lead another group.

C. You choose a blue marble from a bag and set it aside. Then you choose a green marble from the bag.

D. You roll a 5 on a number cube and spin blue on a spinner.

Probability of Independent Events:

Examples: *Find the probability of the independent events:*

A. You flip 2 quarters. What is the probability that you flip two heads?

B. You flip a coin and roll a number cube. What is the probability that you flip tails and roll a number less than 5?

Probability of Dependent Events:

Examples: *Find the probability of the dependent events:*

A. You randomly choose a flower from the vase to take home. Your friend randomly chooses another flower from the vase to take home. What is the probability that you choose a purple flower and your friend chooses a yellow flower?

Purple: 7
Yellow: 9
Pink: 12

B. The students in Classroom 101 consist of 13 girls and 7 boys. The students in Classroom 103 consist of 8 girls and 12 boys. You randomly choose one student from each classroom. Find the probability of the events.

- Choosing a boy from both classrooms

- Choosing a girl from Classroom 101 and a boy from Classroom 103

- Choosing a boy from Classroom 101 and a girl from Classroom 103

Progress Monitoring: *How do you feel about your level of understanding of solving problems involving probability of independent and dependent events?* (Rate yourself from 0 (don't understand at all) to 10 (doing awesome))

Number Line

0   1   2   3   4   5   6   7   8   9   10