NAME _____ QUARTER _____

GRADE & SECTION _____ DATE _____

Activity: Dependent and Independent Events

KEY CONCEPT *For Your Notebook*

Probability of Independent Events

If A and B are independent events, then the probability that both A and B occur is:

$$P(A \text{ and } B) = P(A) \cdot P(B)$$

More generally, the probability that n independent events occur is the product of the n probabilities of the individual events.

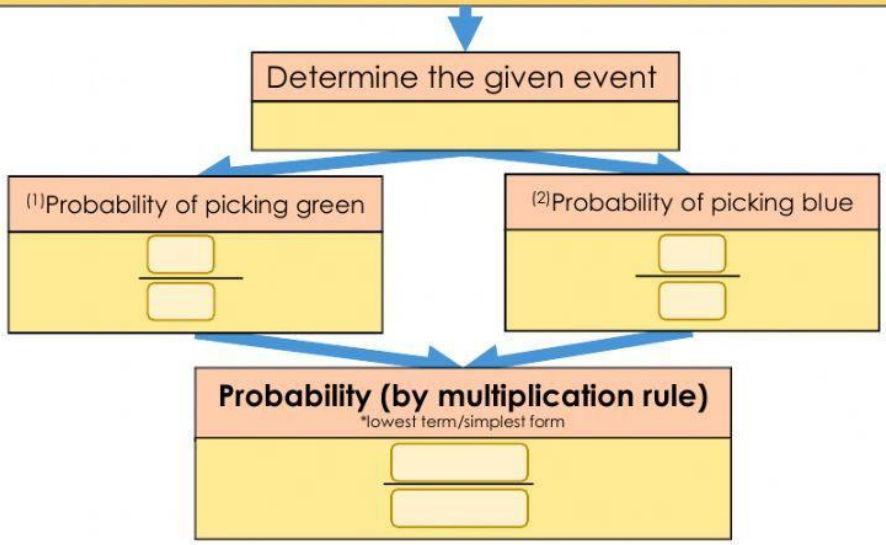
Probability of Dependent Events

If A and B are dependent events, then the probability that both A and B occur is:

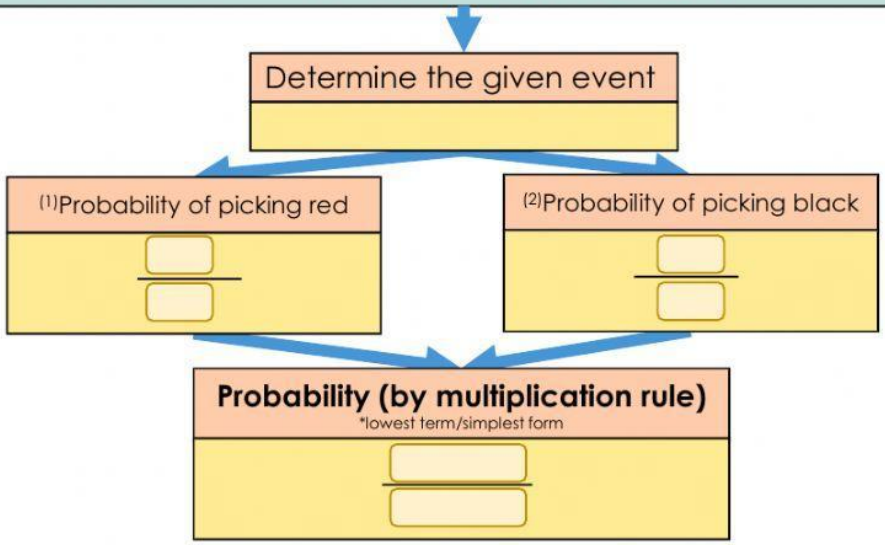
$$P(A \text{ and } B) = P(A) \cdot P(B|A)$$

Complete the Math-Breaker Map to guide in finding the probability of the indicated events.

1. A jar contains 4 blue marbles, 5 red marbles, 2 black marbles, and 1 green marble. A marble is picked at random from the jar. After replacing it, another marble is picked. Find **P(green, blue).**



2. A jar contains 4 blue marbles, 5 red marbles, 2 black marbles, and 1 green marble. A marble is picked at random from the jar. if the first marble picked was not replaced, find **P(red, black).**



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3. A bowl contains 6 paper strips, each with one of the letters R, R, S, S, S, and T on it. If two paper strips are pulled one after the other with replacement, what is the probability that the letters taken are S, then R?

Determine the given event

(1)Probability of pulling S

(2)Probability of pulling R

Probability (by multiplication rule)
*lowest term/simplest form

4. A bowl contains 6 paper strips, each with one of the letters R, R, S, S, S, and T on it. If three paper strips are pulled one after the other without replacement, that is the probability that the letters taken are R, then S, then T?

Determine the given event

(1)Probability of pulling R

(2)Probability of pulling S

(3)Probability of pulling T

Probability (by multiplication rule)
*lowest term/simplest form

In a scale from 1 to 4, 1 is the lowest and 4 is the highest, how helpful was the Math-Breaker Map in solving problems involving finding probability?

How many attempts? ___.
How well did you do?

Need help! Just OK! Splendid

I HAVE TO…

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