

# Independent and dependent events

Name: \_\_\_\_\_

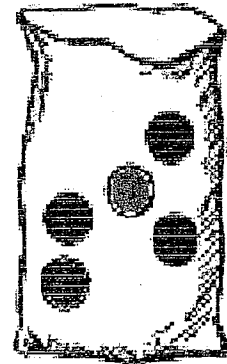
Date: \_\_\_\_\_

Period: \_\_\_\_\_

complete with your group after the activity.

There are 5 marbles in a bag. Four are blue and one is red. If a marble is selected **at random** from the bag and **not replaced** back into the bag, the chance of drawing the red marble will keep increasing with each **consecutive** draw.

The probability started at \_\_\_\_ to \_\_\_\_\_. After drawing a marble, it then increased to \_\_\_\_ out of \_\_\_\_\_. From there, it went to \_\_\_\_\_ to \_\_\_\_\_. And then \_\_\_\_\_ to \_\_\_\_\_. Finally, \_\_\_\_\_:\_\_\_\_\_.

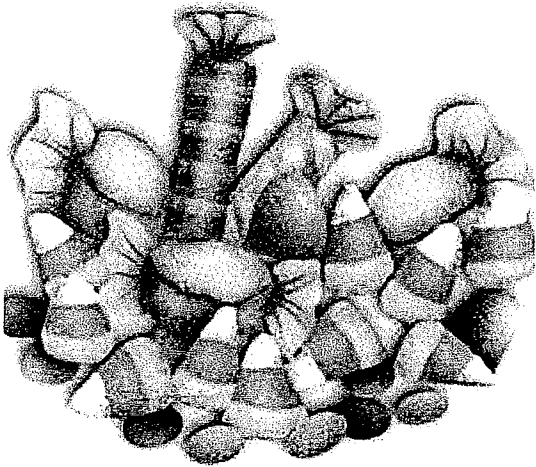


Would it be **equally likely** to choose a red or a blue marble from the bag? Why or why not?

Lets look at the marble bag again. If a marble is selected **at random** and **replaced** into the bag (or with replacement), the chance of drawing the red marble will not increase with each consecutive draw.

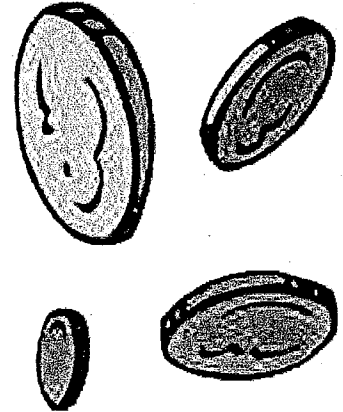
**With replacement**, will the probability of choosing a red marble change with each draw? Why or why not?





There are 3 red candies left in a bag of multicolored candies with a total of 20 candies in it. The probability that you will get a red one when you reach in is \_\_\_\_\_. But what are your chances of getting a red one if you reach in again? There are now \_\_\_\_\_ candies in the bag and only two are red. The probability of choosing another red candy is \_\_\_\_\_. Choosing the first candy affected the outcome of the next attempt. The two events are \_\_\_\_\_ (independent or dependent?)

You know that the probability of landing heads up when you flip a coin is \_\_\_\_\_. What is the probability of getting tails if you flip again? Are these events dependent or independent? Explain why.



Go to your vocabulary sheet and fill in the definitions for **independent event**, **dependent event**, **at random**, **equally likely**, **with replacement**, and **consecutive**. You may use your textbook.