

Name _____

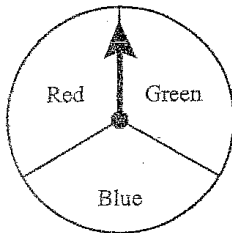
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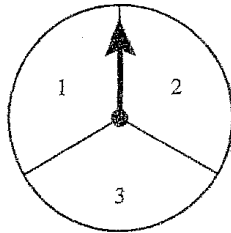
PROBABILITY PRACTICE

1

Tai plays a game using two spinners. Each spinner is divided into three sections of equal size, as shown below.



Spinner M



Spinner N

Tai will spin the arrow on each spinner one time.

The organized list below shows all possible combinations of sections on which the arrows can land.

Red 1	Blue 1	Green 1
Red 2	Blue 2	Green 2
Red 3	Blue 3	Green 3

What is the probability that the arrow on Spinner M will land on the green section and the arrow on Spinner N will land on a section with an odd number?

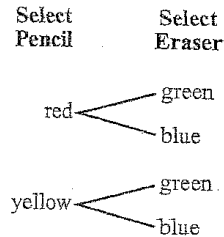
- A. $\frac{1}{9}$
- B. $\frac{2}{9}$
- C. $\frac{1}{3}$
- D. $\frac{2}{3}$

2

Nick has the following items in a bag:

- one red pencil
- one yellow pencil
- one green eraser
- one blue eraser

Nick will randomly select one pencil and one eraser from the bag. Both pencils are the same size and shape. Both erasers are the same size and shape. The tree diagram below shows all the possible combinations Nick can select.



What is the probability that Nick will select a red pencil and a blue eraser?

- A. $\frac{1}{4}$
- B. $\frac{1}{3}$
- C. $\frac{1}{2}$
- D. $\frac{3}{4}$

- 8 A fair cube has three red faces and three blue faces. When the cube is rolled, the outcome is that it will land with either a red face or a blue face on top. The organized list below shows all of the possible combinations of outcomes for rolling this cube 3 times.

R R R B R R
 R B R B B R
 R R B B R B
 R B B B B B

Key
R represents red
B represents blue

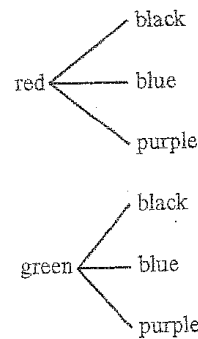
If a cube is rolled 3 times, what is the probability that it will land with a red face on top 2 times and a blue face on top 1 time, in any order?

- A. $\frac{3}{8}$
 B. $\frac{1}{2}$
 C. $\frac{2}{3}$
 D. $\frac{3}{5}$

- 9 Sarah has the following items in her book bag:

- one red 12-inch ruler
- one green 12-inch ruler
- one black pen
- one blue pen
- one purple pen

Sarah will randomly select one 12-inch ruler and one pen. The tree diagram below shows all of the possible combinations of one 12-inch ruler and one pen that Sarah could select.



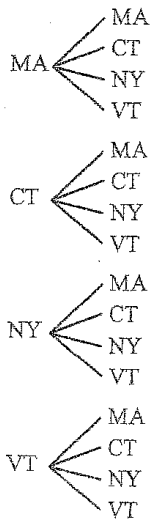
What is the probability that Sarah will select a green 12-inch ruler and either a black or a purple pen?

- A. $\frac{1}{4}$
 B. $\frac{1}{3}$
 C. $\frac{1}{2}$
 D. $\frac{2}{3}$

In her pocket, Sheena has one state quarter for each of the states listed below.

- Massachusetts (MA)
- Connecticut (CT)
- New York (NY)
- Vermont (VT)

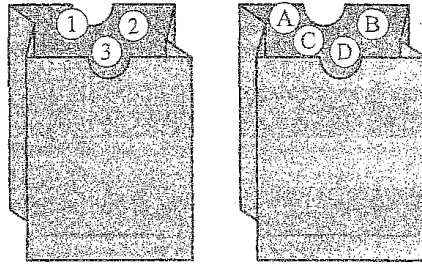
She randomly selects a quarter and returns it to her pocket. Then she does this a second time. The tree diagram below shows all of the possible combinations of quarters that Sheena can select.



What is the probability that Sheena will select the Massachusetts quarter both times?

- A. $\frac{1}{16}$
- B. $\frac{1}{4}$
- C. $\frac{1}{3}$
- D. $\frac{1}{2}$

Steven has one bag that contains three table-tennis balls numbered 1, 2, and 3. He also has a second bag that contains four table-tennis balls lettered A, B, C, and D.



The organized list in the box below shows all of the possible combinations of numbers and letters that Steven can get when he selects one ball from each bag.

1 A	2 A	3 A
1 B	2 B	3 B
1 C	2 C	3 C
1 D	2 D	3 D

When Steven randomly selects one ball from each bag, what is the probability that he will select a table-tennis ball with a 1 on it and also a table-tennis ball with a B on it?

- A. $\frac{1}{12}$
- B. $\frac{1}{11}$
- C. $\frac{1}{4}$
- D. $\frac{1}{3}$