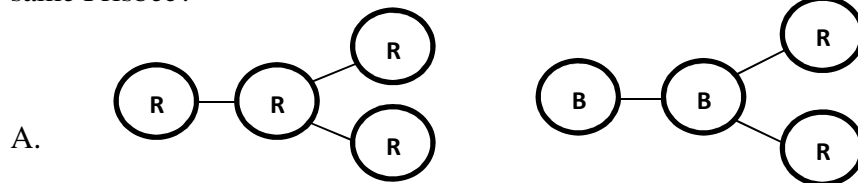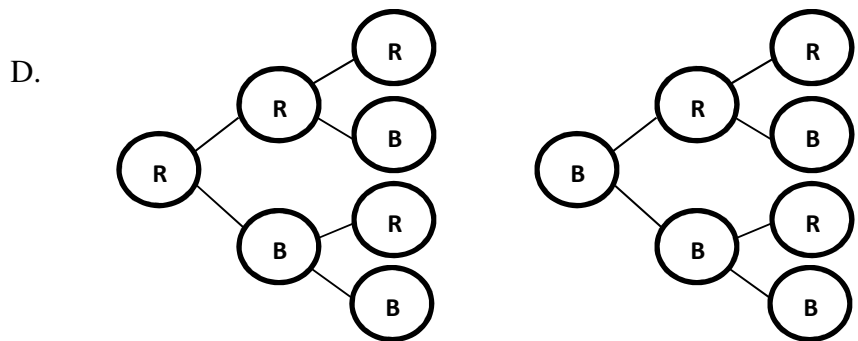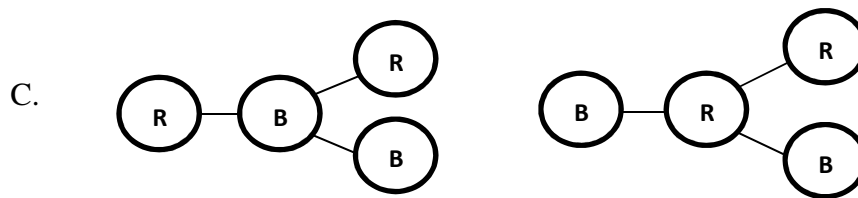## Show all work on a separate sheet of paper.

1.

Elise had a Frisbee that was red on one side and blue on the other. She tossed the Frisbee 3 times. Which diagram shows all the possible results she could get in 3 tosses of the same Frisbee?

A.

B.

C.

D.
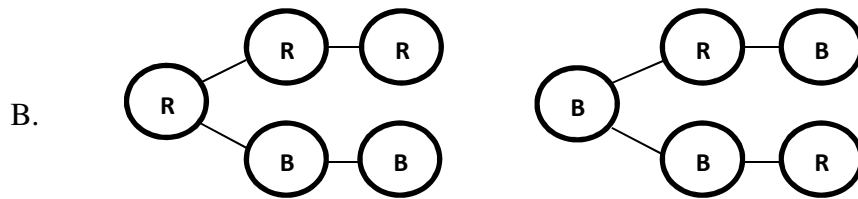
2.	There are 24 students in Nick's math class. 12 of the students have brown hair, 4 have red hair, 5 have blonde hair, and 3 have black hair. If Mr. Underwood randomly selects 1 student to answer a question, what is the probability that this student will have black hair? A. $\dfrac{1}{2}$ B. $\dfrac{1}{6}$ C. $\dfrac{1}{8}$ D. $\dfrac{1}{24}$	
3.	How many different ways can these 4 objects be arranged in a row if the triangle must be used first?	
4.	Tim plays basketball for the Dragons. In the past 12 games, Tim has scored 24 or more points 4 times. If this trend continues, what is the probability that Tim will score 24 or more points in tonight's game? A. $\dfrac{1}{24}$ B. $\dfrac{1}{12}$ C. $\dfrac{1}{8}$ D. $\dfrac{1}{3}$	
5.	The table below shows the ice cream preferences of 40 people. **Favorite Ice Cream** | Color	Number of Students
---	---
Cookie and Cream	12
Chocolate Chip	6
Vanilla	9
Strawberry	8
Butter Pecan	5 | What is the probability that one student selected at random prefers chocolate chip ice cream?	
6.	In the problem above, how many students would you expect to choose strawberry if you asked 100 students?	

	Max has eight different colors of socks he can wear: white, black, gray, purple, brown, yellow, green, and blue. Use this information for the questions below. (Write answers in simplest form.)	
7.	If he selects a color of sock at random, what is the probability it will be black or gray?	
8.	If he selects a shirt at random, what is the probability it will be a color with the letter E somewhere in it?	
9.	Use a tree diagram to find how many combinations can be made from Max's eight colored socks and two different pairs of shoes: tennis or dress shoes.	

	A snow cone stand sells small, medium, and large snow cones. You can choose from grape, strawberry, or orange flavor. Make a tree diagram **and list** all of the different cones you can choose from in the space below.
10.	

Suppose you choose one of the cards shown without looking. Find the probability of each event.

5	24
15	48
35	72
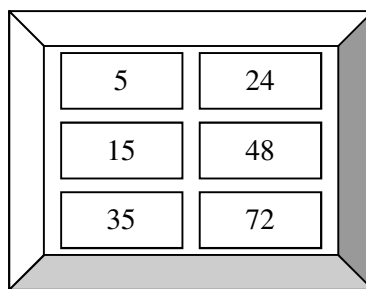
11.	P(48)		12.	P(Divisible by 5)	
13.	P(Greater than 25)		14.	P(Less than 3)	
15.	P(15 or 35)		16.	P(Not 72)	
17.	P(Between 1 and 100)		18.	P(Multiple of 4)	

19.	Brian has a 5 digit combination lock on his bicycle. He knows that the first four numbers are as listed below. | **6**	**3**	**2**	**1**	
---	---	---	---	---	 The digits may be repeated. How many numbers must Brian try before he is sure to open the lock on his bicycle? A. 10 B. 12 C. 336 D. 1000	
20.	Don tossed a coin 100 times and got heads 42 times. Based on Don's experiment, what is the experimental probability of heads? Please write your answer as a fraction in simplest form.	
21.	Using the information in the problem above, what is the experimental probability of tails? Please write your answer as a fraction in simplest form.	