

Algebra II Outcomes

Name _____

Notes:

Sample Space: Listing the outcomes of an event.

Example:

In a bag there are red, blue, and green marbles.

List all possible outcomes of picking 3 marbles from the bag.

Tree Diagram:

List:

Table:

Homework

- 1) Suppose you roll a die then flip a coin.
 - a) List the sample space for this situation.

 - b) How many outcomes have an even number on the die?
 - c) How many outcomes has heads on the coin?
 - d) How many outcomes has heads or tails on the coin?

- 2) Two dice are thrown, list all the possible outcomes by making a 2-way table.

The number of dots showing on the top of each die is counted, find the number of outcomes using your list above.

- a) The sum of the numbers showing is 7.
 - b) Both numbers showing are even.
 - c) Both numbers showing are the same.
 - d) The product of the numbers showing is less than 16.
-
- 3) Make a list of possible outcomes of having 4 children.

How many outcomes are there? _____

Algebra II

Outcomes

Name _____

Key

Notes:

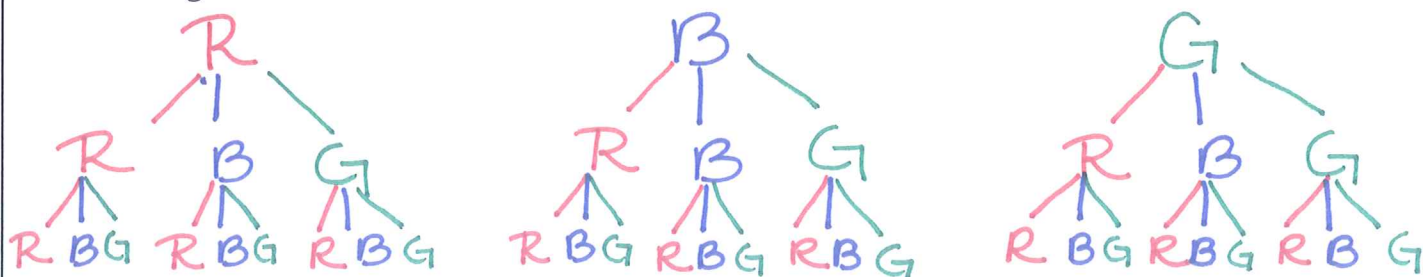
Sample Space: Listing the outcomes of an event.

Example:

In a bag there are red, blue, and green marbles.

List all possible outcomes of picking 3 marbles from the bag.

Tree Diagram:



List:

- | | | | | |
|------|-----|-----|------|-----|
| RRR | RGR | BBR | GRR | GGR |
| R RB | RGB | BBB | GRB | GGB |
| R RG | RGG | BBG | GRG | GGG |
| R BR | BRR | BGR | G BR | |
| R BB | BRB | BGB | G BB | |
| R BG | BRG | BGG | G BG | |

Table:

Two-way ~ Pick 2 marbles

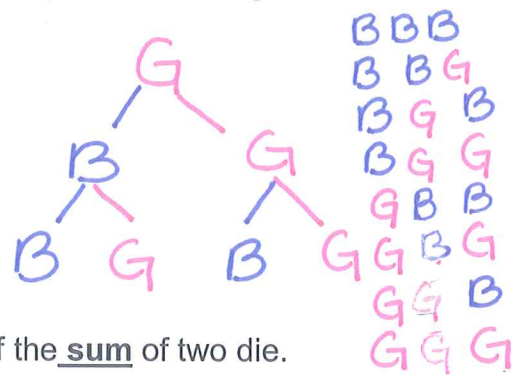
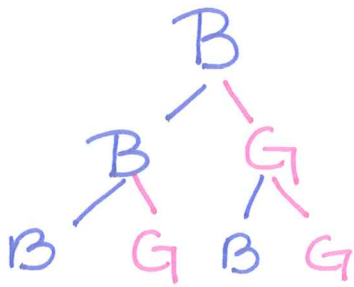
	R	B	G
R	RR	RB	RG
B	BR	BB	BG
G	GR	GB	GG

1st marble

2nd marble

Classwork:

1. a) How many different outcomes are possible when having 3 children? 8
 b) Make a tree diagram to represent the sample space for having 3 children.



2. Make a table to represent the sample space of the sum of two die.

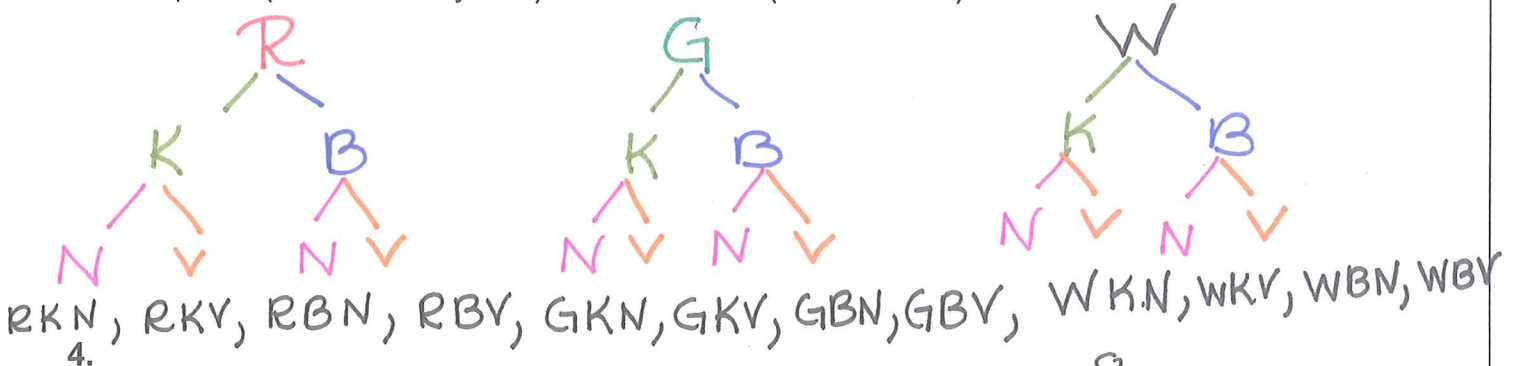
	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

How many outcomes are there

How many outcomes have a sum ≥ 10

3. a) How many outfits can be created from three shirts, 2 pants, and 2 shoes? 12

- b). List/create the sample space for the number of outfits from three shirts (red, green, white), two pants (khaki & blue jeans) and two shoes (Nike & Vans).



4. a) How many outcomes are possible when flipping three coins? 8
 b) List the sample space for flipping three coins.

HHH
 HHT
 HTH
 HTT

TTT
 TTH
 THT
 THT

Homework

1) Suppose you roll a die then flip a coin.

a) List the sample space for this situation.

	1	2	3	4	5	6
H	H1	H2	H3	H4	H5	H6
T	T1	T2	T3	T4	T5	T6

b) How many outcomes have an even number on the die? 6

c) How many outcomes has heads on the coin? 6

d) How many outcomes has heads or tails on the coin? 12

2) Two dice are thrown, list all the possible outcomes by making a 2-way table.

	1	2	3	4	5	6
1	1,1	1,2	1,3	1,4	1,5	1,6
2	2,1	2,2	2,3	2,4	2,5	2,6
3	3,1	3,2	3,3	3,4	3,5	3,6
4	4,1	4,2	4,3	4,4	4,5	4,6
5	5,1	5,2	5,3	5,4	5,5	5,6
6	6,1	6,2	6,3	6,4	6,5	6,6

The number of dots showing on the top of each die is counted, find the number of outcomes using your list above.

a) The sum of the numbers showing is 7. 6

b) Both numbers showing are even. 9

c) Both numbers showing are the same. 6

d) The product of the numbers showing is less than 16. 25

3) Make a list of possible outcomes of having 4 children.

