

Probability

How likely is it? Use the words impossible to certain.

Remember

impossible

unlikely

equally likely

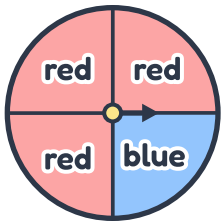
likely

certain

less likely

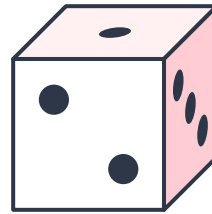
more likely

Write how likely each event is. Use a word from the box.

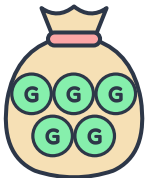


Example Spin red.

likely



1. Roll an 8.



G = green

2. Pick a green marble.



3. Flip the coin. Get tails.

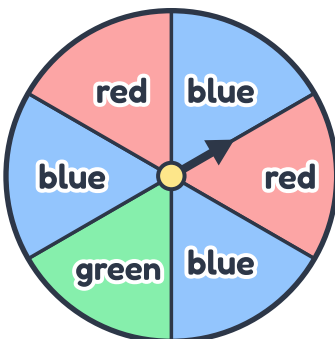


4. Pick a card with a number less than 10.



5. Spin a number greater than 1.

Write an event for each word. Use this spinner.



Example

impossible

Spin purple.

6.

unlikely

7.

equally likely

8.

likely

9.

certain

Probability

Write the probability of each event as a number from 0 to 1.

Remember

$$\text{probability} = \frac{\text{number of ways it can happen}}{\text{number of possible outcomes}}$$

impossible = 0

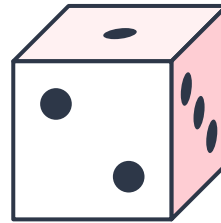
certain = 1

Write the probability as a fraction.



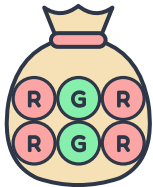
Example Spin a 6, 7 or 8.

Probability: $\frac{3}{8}$



1. Roll a number less than 3.

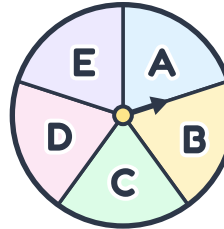
Probability:



R = red G = green

2. Pick a red marble.

Probability:



3. Spin a vowel.

Probability:



4. Pick an odd number.

Probability:



5. Flip the coin. Get heads.

Probability:

Pick 1 of these 24 cards without looking. Write each probability.



Example

an even number

$\frac{12}{24}$

6. a multiple of 5

7. the number 25

8. a multiple of 3

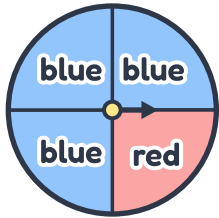
9. a number with a 2 in it

10. a number less than 25

Probability

Show each probability on a number line from 0 to 1.

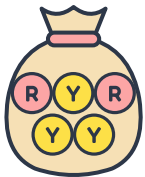
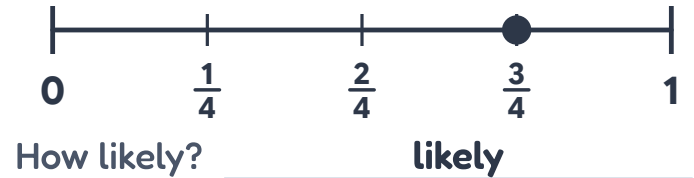
Write the probability. Mark it with a dot on the line. Name it.



Example Spin blue.

Probability:

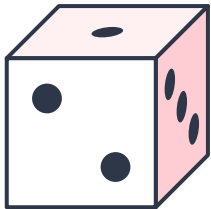
$$\frac{3}{4}$$



R = red Y = yellow

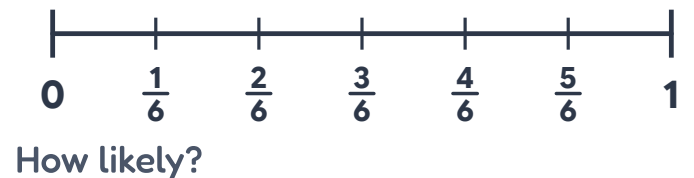
1. Pick a red marble.

Probability:

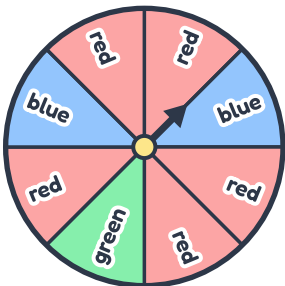


2. Roll a number less than 4.

Probability:



Write each letter in the box over its probability.



A Spin red. **Example**

B Spin blue.

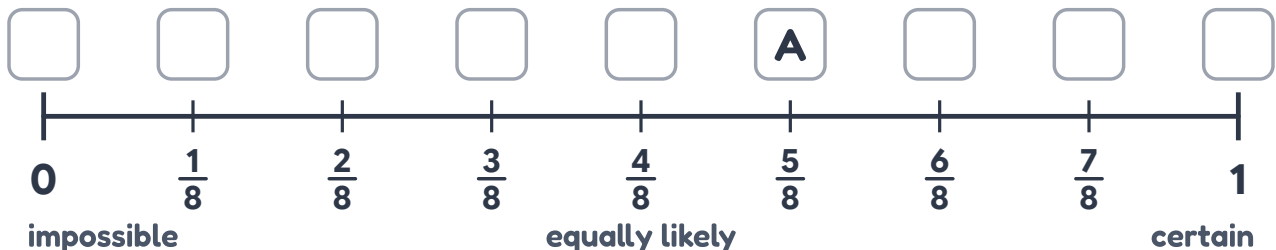
C Spin green.

D Spin yellow.

E Spin red, blue or green.

F Spin red or blue.

G Do not spin red.

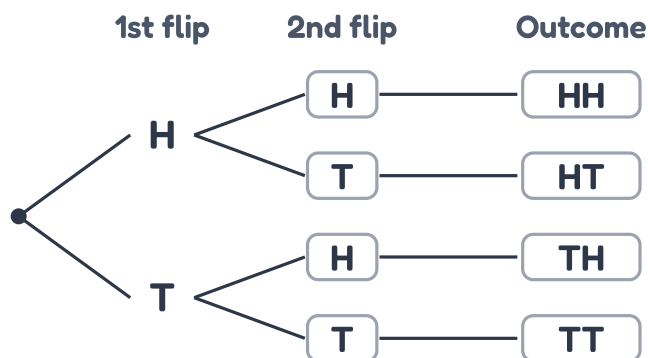


Probability

List the outcomes. Find probabilities. Multiply to count outcomes.

Finish the tree diagram. Then find the probability.

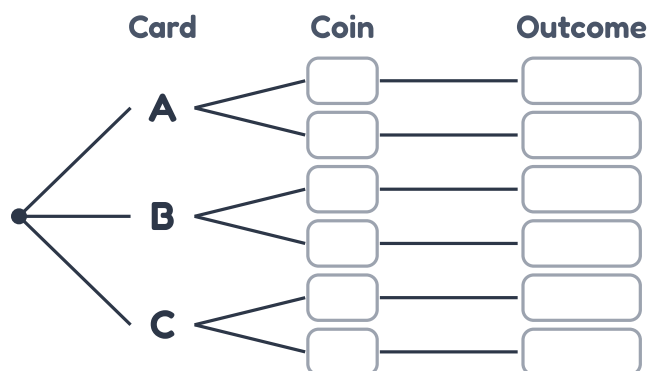
Example Flip a coin two times.



Probability of two heads:

$$\frac{1}{4}$$

1. Pick a card: A, B or C. Flip a coin.



Probability of B and tails:

Spin A, B or C and roll a number cube. Fill in the chart.

Example A1 means A and 1.

	1	2	3	4	5	6
A	A1	A2				
B						
C						

2. How many outcomes? _____

Find the probability of:

3. B and 2, 4 or 6 4. C and 6 5. a 1 or a 2

Multiply to find how many outcomes there are.

Example An outfit is 1 of 3 shirts and 1 of 4 pairs of pants. How many outfits?

$$3 \times 4 = 12$$

6. A lunch is 1 of 5 sandwiches and 1 of 3 drinks. How many different lunches?

$$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

7. Flip a coin (2 sides). Spin a spinner with 8 parts. How many outcomes?

$$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

8. Pick 1 of 2 breads, 1 of 3 fillings and 1 of 4 cheeses. How many sandwiches?

$$\underline{\hspace{1cm}} \times \underline{\hspace{1cm}} \times \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$$

Probability

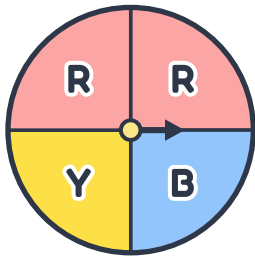
Make a model for each probability. Then write stories.

Remember

R: $\frac{1}{2}$ means the probability of getting R is $\frac{1}{2}$.

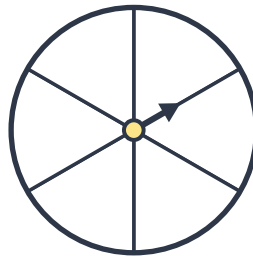
Write a letter in every part so each probability is true.

Example



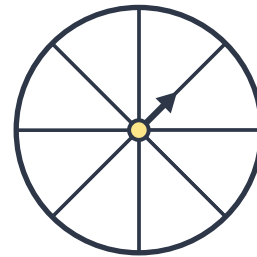
R: $\frac{1}{2}$
B: $\frac{1}{4}$
Y: $\frac{1}{4}$

1.



R: $\frac{1}{3}$
B: $\frac{1}{2}$
G: $\frac{1}{6}$

2.



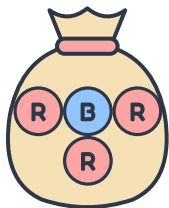
B: $\frac{3}{8}$
G: $\frac{1}{4}$
Y: $\frac{3}{8}$

Write letters or numbers so each probability is true.

Example

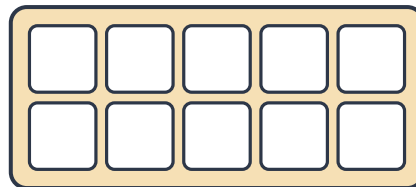
Marbles

R: $\frac{3}{4}$ B: $\frac{1}{4}$



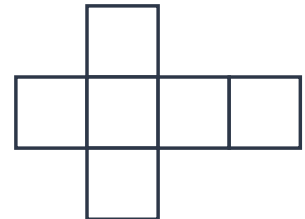
3. Tiles

R: $\frac{2}{5}$ B: $\frac{1}{2}$ G: $\frac{1}{10}$



4. A number cube

3: $\frac{1}{2}$ 5: $\frac{1}{3}$ 6: 0



Write a probability story for each answer.

Example

Probability $\frac{1}{4}$: A bag has 1 red marble and 3 blue marbles. What is the probability of picking red?

5. Probability $\frac{2}{3}$:

6. Probability 0:

Probability

How likely is it? Use the words impossible to certain.

Remember

impossible

unlikely

equally likely

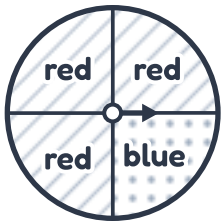
likely

certain

less likely

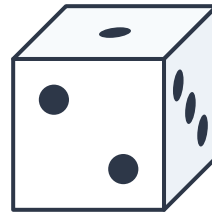
more likely

Write how likely each event is. Use a word from the box.



Example Spin red.

likely



1. Roll an 8.



G = green

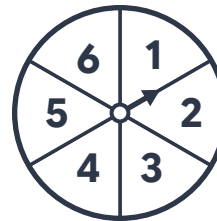
2. Pick a green marble.



3. Flip the coin. Get tails.

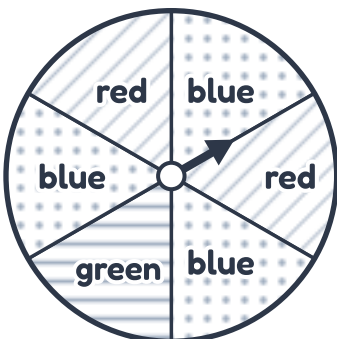


4. Pick a card with a number less than 10.



5. Spin a number greater than 1.

Write an event for each word. Use this spinner.



Example

impossible

Spin purple.

6.

unlikely

7.

equally likely

8.

likely

9.

certain

Probability

Write the probability of each event as a number from 0 to 1.

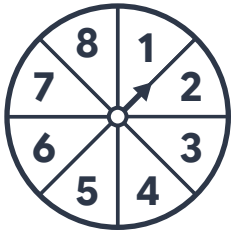
Remember

$$\text{probability} = \frac{\text{number of ways it can happen}}{\text{number of possible outcomes}}$$

impossible = 0

certain = 1

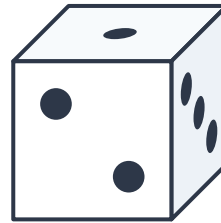
Write the probability as a fraction.



Example Spin a 6, 7 or 8.

Probability:

$$\frac{3}{8}$$



1. Roll a number less than 3.

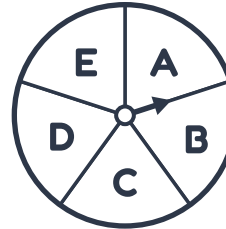
Probability:



R = red G = green

2. Pick a red marble.

Probability:



3. Spin a vowel.

Probability:



4. Pick an odd number.

Probability:



5. Flip the coin. Get heads.

Probability:

Pick 1 of these 24 cards without looking. Write each probability.



Example

an even number

$$\frac{12}{24}$$

6. a multiple of 5

7. the number 25

8. a multiple of 3

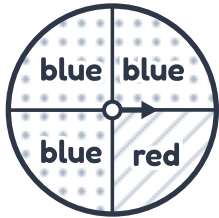
9. a number with a 2 in it

10. a number less than 25

Probability

Show each probability on a number line from 0 to 1.

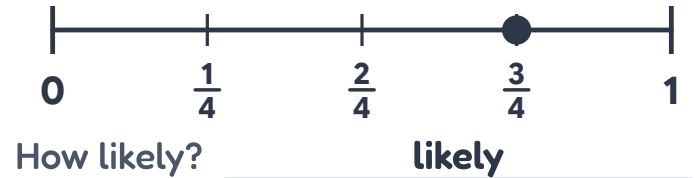
Write the probability. Mark it with a dot on the line. Name it.



Example Spin blue.

Probability:

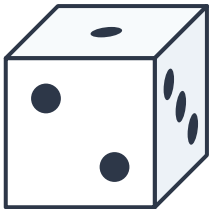
$\frac{3}{4}$



R = red Y = yellow

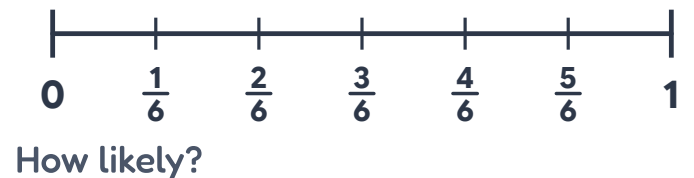
1. Pick a red marble.

Probability:

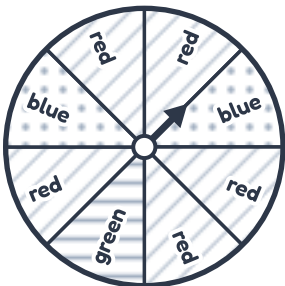


2. Roll a number less than 4.

Probability:



Write each letter in the box over its probability.



A Spin red. **Example**

B Spin blue.

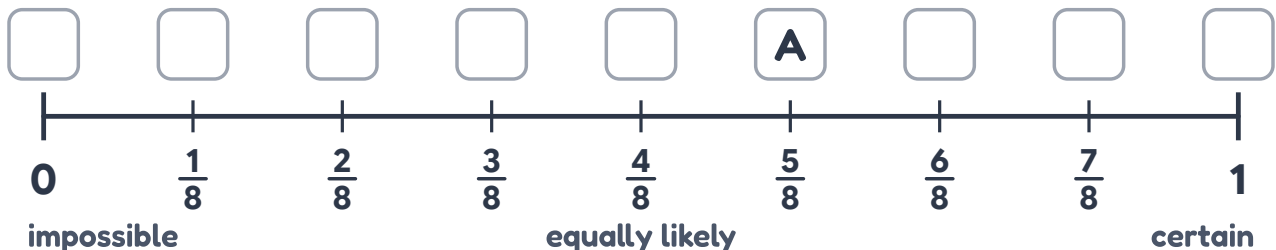
C Spin green.

D Spin yellow.

E Spin red, blue or green.

F Spin red or blue.

G Do not spin red.



Probability

List the outcomes. Find probabilities. Multiply to count outcomes.

Finish the tree diagram. Then find the probability.

Example

Flip a coin two times.

1st flip

2nd flip

Outcome

H

T

H

T

HH

HT

TH

TT

Probability of two heads:

$\frac{1}{4}$

1. Pick a card: A, B or C. Flip a coin.

Card

Coin

Outcome

A

B

C

Probability of B and tails:

Spin A, B or C and roll a number cube. Fill in the chart.

Example

A1 means A and 1.

	1	2	3	4	5	6
A	A1	A2				
B						
C						

2. How many outcomes? _____

Find the probability of:

3. B and 2, 4 or 6

4. C and 6

5. a 1 or a 2

Multiply to find how many outcomes there are.

Example

An outfit is 1 of 3 shirts and 1 of 4 pairs of pants. How many outfits?

$3 \times 4 = 12$

6. A lunch is 1 of 5 sandwiches and 1 of 3 drinks. How many different lunches?

$\times =$

7. Flip a coin (2 sides). Spin a spinner with 8 parts. How many outcomes?

$\times =$

8. Pick 1 of 2 breads, 1 of 3 fillings and 1 of 4 cheeses. How many sandwiches?

$\times \times =$

Probability

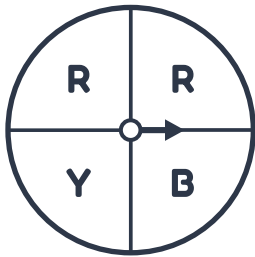
Make a model for each probability. Then write stories.

Remember

R: $\frac{1}{2}$ means the probability of getting R is $\frac{1}{2}$.

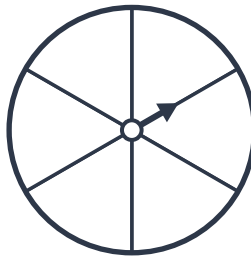
Write a letter in every part so each probability is true.

Example



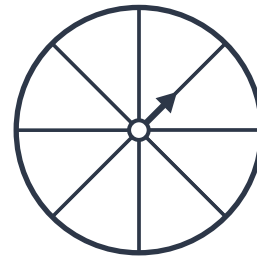
R: $\frac{1}{2}$
B: $\frac{1}{4}$
Y: $\frac{1}{4}$

1.



R: $\frac{1}{3}$
B: $\frac{1}{2}$
G: $\frac{1}{6}$

2.



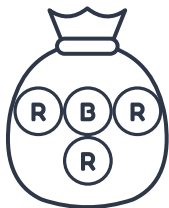
B: $\frac{3}{8}$
G: $\frac{1}{4}$
Y: $\frac{3}{8}$

Write letters or numbers so each probability is true.

Example

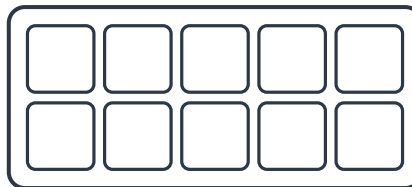
Marbles

R: $\frac{3}{4}$ B: $\frac{1}{4}$



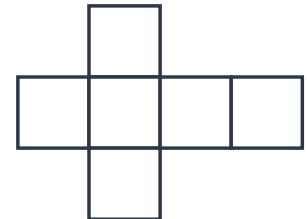
3. Tiles

R: $\frac{2}{5}$ B: $\frac{1}{2}$ G: $\frac{1}{10}$



4. A number cube

3: $\frac{1}{2}$ 5: $\frac{1}{3}$ 6: 0



Write a probability story for each answer.

Example

Probability $\frac{1}{4}$: A bag has 1 red marble and 3 blue marbles. What is the probability of picking red?

5. Probability $\frac{2}{3}$:

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Probability

How likely is it? Use the words impossible to certain.

Remember

impossible

unlikely

equally likely

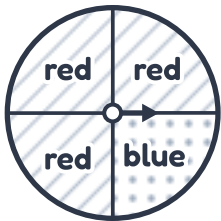
likely

certain

less likely

more likely

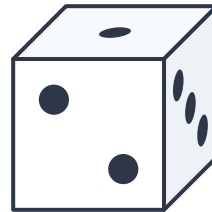
Write how likely each event is. Use a word from the box.



Example

Spin red.

likely



1. Roll an 8.

impossible



G = green

2. Pick a green marble.

certain



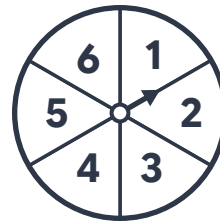
3. Flip the coin. Get tails.

equally likely



4. Pick a card with a number less than 10.

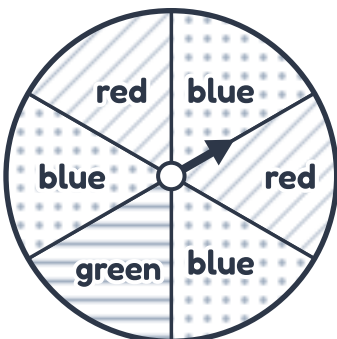
unlikely



5. Spin a number greater than 1.

likely

Write an event for each word. Use this spinner. Sample answers: others work too



Example

impossible

Spin purple.

unlikely

Spin green.

equally likely

Spin blue.

likely

Spin blue or red.

certain

Spin blue, red or green.

Probability

Write the probability of each event as a number from 0 to 1.

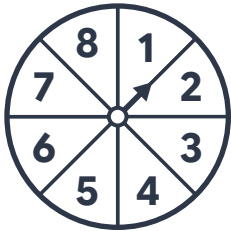
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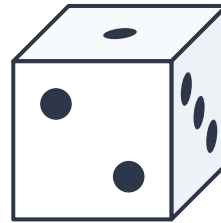
Write the probability as a fraction.



Example Spin a 6, 7 or 8.

Probability:

$\frac{3}{8}$



1. Roll a number less than 3.

Probability:

$\frac{2}{6}$

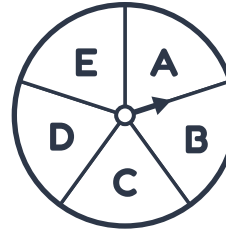


R = red G = green

2. Pick a red marble.

Probability:

$\frac{4}{6}$



3. Spin a vowel.

Probability:

$\frac{2}{5}$



4. Pick an odd number.

Probability:

$\frac{3}{6}$



5. Flip the coin. Get heads.

Probability:

$\frac{1}{2}$

Pick 1 of these 24 cards without looking. Write each probability.



Example

an even number

$\frac{12}{24}$

6. a multiple of 5

$\frac{4}{24}$

7. the number 25

0

8. a multiple of 3

$\frac{8}{24}$

9. a number with a 2 in it

$\frac{7}{24}$

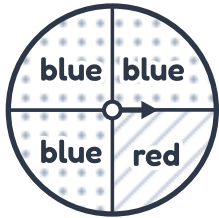
10. a number less than 25

1

Probability

Show each probability on a number line from 0 to 1.

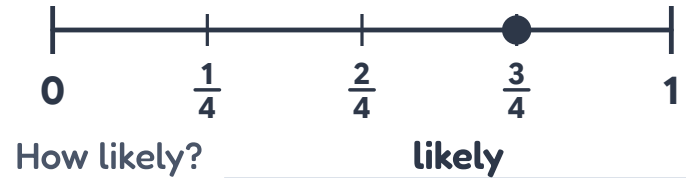
Write the probability. Mark it with a dot on the line. Name it.



Example Spin blue.

Probability:

$$\frac{3}{4}$$

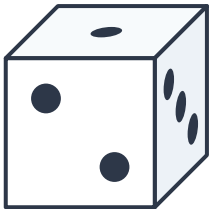
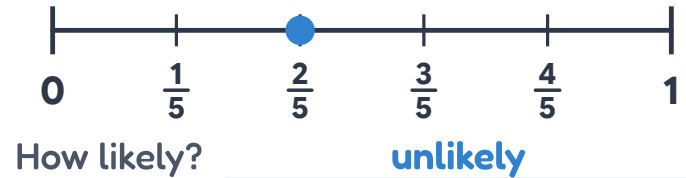


R = red Y = yellow

1. Pick a red marble.

Probability:

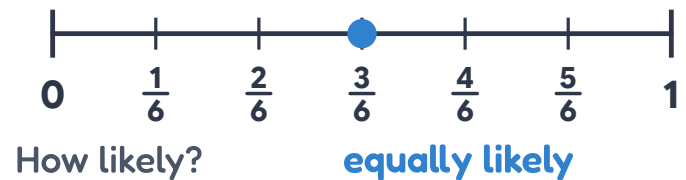
$$\frac{2}{5}$$



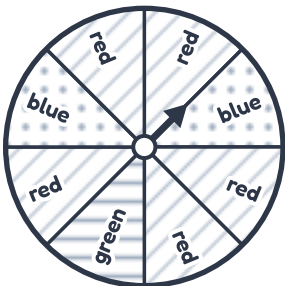
2. Roll a number less than 4.

Probability:

$$\frac{3}{6}$$



Write each letter in the box over its probability.



A Spin red.

B Spin blue.

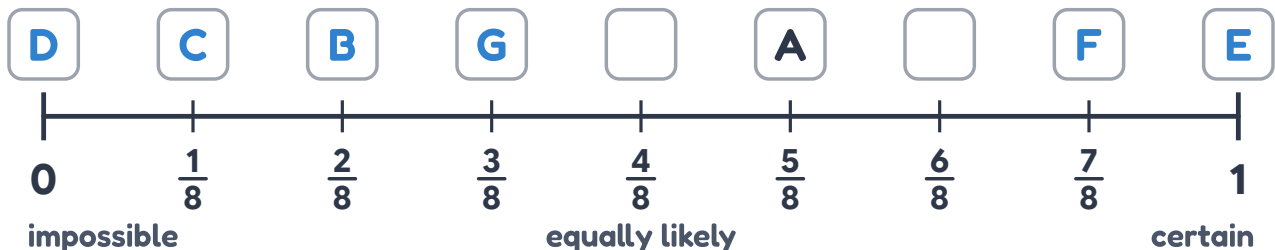
C Spin green.

D Spin yellow.

E Spin red, blue or green.

F Spin red or blue.

G Do not spin red.

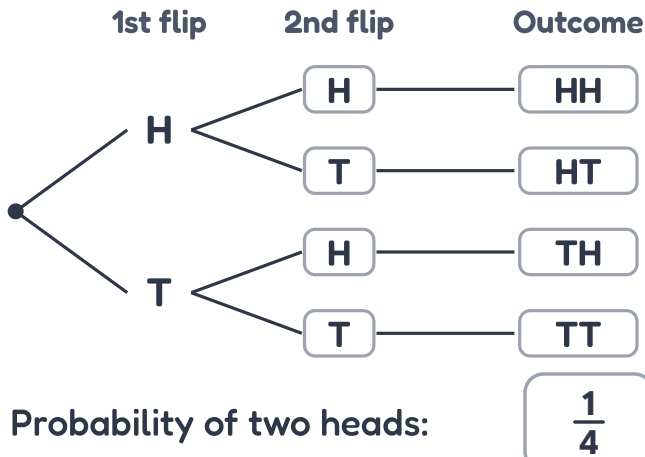


Probability

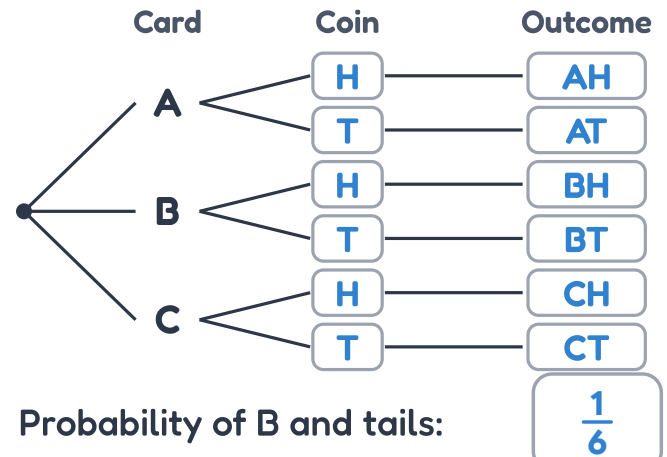
List the outcomes. Find probabilities. Multiply to count outcomes.

Finish the tree diagram. Then find the probability.

Example Flip a coin two times.



1. Pick a card: A, B or C. Flip a coin.



Spin A, B or C and roll a number cube. Fill in the chart.

Example A1 means A and 1.

	1	2	3	4	5	6
A	A1	A2	A3	A4	A5	A6
B	B1	B2	B3	B4	B5	B6
C	C1	C2	C3	C4	C5	C6

2. How many outcomes? 18

Find the probability of:

3. B and 2, 4 or 6 4. C and 6 5. a 1 or a 2

$$\frac{3}{18}$$

$$\frac{1}{18}$$

$$\frac{6}{18}$$

Multiply to find how many outcomes there are.

Example An outfit is 1 of 3 shirts and 1 of 4 pairs of pants. How many outfits?

$$3 \times 4 = 12$$

6. A lunch is 1 of 5 sandwiches and 1 of 3 drinks. How many different lunches?

$$5 \times 3 = 15$$

7. Flip a coin (2 sides). Spin a spinner with 8 parts. How many outcomes?

$$2 \times 8 = 16$$

8. Pick 1 of 2 breads, 1 of 3 fillings and 1 of 4 cheeses. How many sandwiches?

$$2 \times 3 \times 4 = 24$$

Probability

Make a model for each probability. Then write stories.

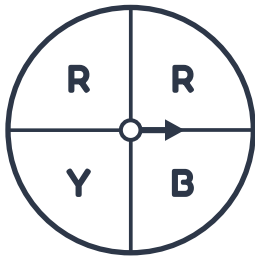
Remember

R: $\frac{1}{2}$ means the probability of getting R is $\frac{1}{2}$.

Write a letter in every part so each probability is true.

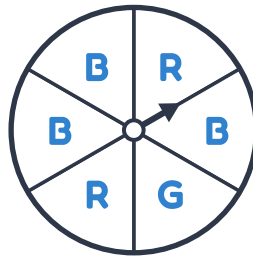
One answer each

Example



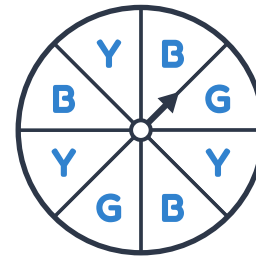
R: $\frac{1}{2}$
B: $\frac{1}{4}$
Y: $\frac{1}{4}$

1.



R: $\frac{1}{3}$
B: $\frac{1}{2}$
G: $\frac{1}{6}$

2.



B: $\frac{3}{8}$
G: $\frac{1}{4}$
Y: $\frac{3}{8}$

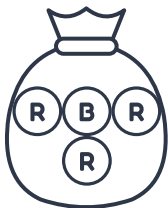
Write letters or numbers so each probability is true.

One answer each

Example

Marbles

R: $\frac{3}{4}$ B: $\frac{1}{4}$



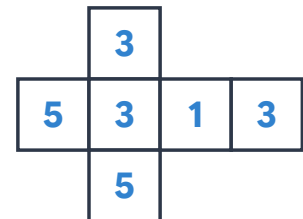
3. Tiles

R: $\frac{2}{5}$ B: $\frac{1}{2}$ G: $\frac{1}{10}$



4. A number cube

3: $\frac{1}{2}$ 5: $\frac{1}{3}$ 6: 0



Write a probability story for each answer.

Sample stories: others work too

Example

Probability $\frac{1}{4}$: A bag has 1 red marble and 3 blue marbles. What is the probability of picking red?

5. Probability $\frac{2}{3}$:

A spinner has 3 equal parts: 2 green and 1 yellow. What is the probability of spinning green?

6. Probability 0:

A number cube has the numbers 1 to 6. What is the probability of rolling a 9?