Marble Bag Probability

I can identify the probability of a chance experiment. (ACMSP067)

Here is a bag of different coloured marbles:

Green

Red

Purple

Black

What is the probability of pulling out a red marble?

_____

Is there an even chance of pulling out both a black and green marble?

_____

What is the probability of pulling out a black marble?

_____

_____

Is it possible to pull an orange marble out of the bag?

_____

_____

Is it unlikely that a purple marble will be pulled out of the bag?

_____

_____

Marble Bag Probability - **Answers**

Here is a bag of different coloured marbles.

What is the probability of pulling out a red marble?
Unlikely/very unlikely. There is only 1 red marble in the bag out of 12.

Is there an even chance of pulling out both a black and green marble?
No, it is not an even chance because there are more black marbles than green marbles.

What is the probability of pulling out a black marble?
Possible/likely/very likely/fair chance

Is it possible to pull an orange marble out of the bag?
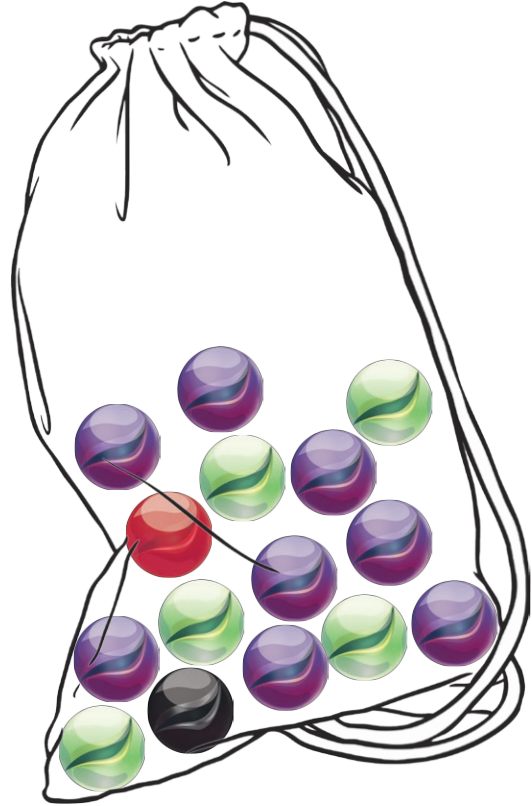**It is impossible as there are no orange marbles in the bag.**

Is it unlikely that a purple marble will be pulled out of the bag?
It is likely that a purple marble will be pulled out. There are three purple marbles in the bag.

Marble Bag Probability

I can identify the probability of a chance experiment. (ACMSP067)

Here is a bag of different coloured marbles:

Green

Red

Purple

Black

What is the likelihood of pulling out a red marble?

_____

Is there an even chance of pulling out both a purple and red marble?

_____

What is the chance of pulling out a green marble?

_____

Is it possible to pull an orange marble out of the bag?

_____

Is it unlikely that a purple marble will be pulled out of the bag?

_____

What is the probability of not picking a black marble?

_____

Marble Bag Probability - **Answers**

Here is a bag of different coloured marbles.

What is the likelihood of pulling out a red marble?
Unlikely/very unlikely

Is there an even chance of pulling out both a purple and red marble?
No there is not an even chance because there is only one red marble and eight purple marbles.

What is the chance of pulling out a green marble?
Likely/possible

Is it possible to pull an orange marble out of the bag?
It is impossible because there are no orange marbles in the bag.

Is it unlikely that a purple marble will be pulled out of the bag?
No, it is likely to pull out a purple marble because there are 8 of them in the bag.
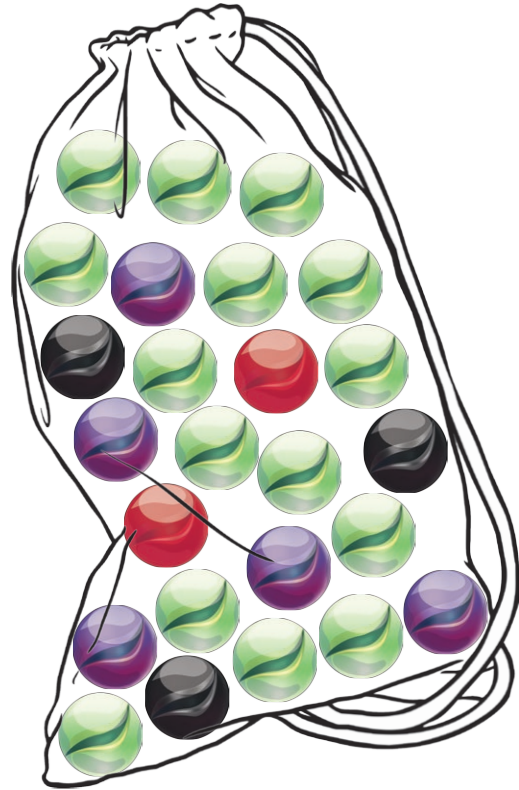
What is the chance of not picking a black marble?
It is likely to pull out a marble that is not black because there is only one black marble in the bag.

Marble Bag Probability

I can identify the probability of a chance experiment. (ACMSP067)

Here is a bag of different coloured marbles:

Green

Red

Purple

Black

What is the likelihood of pulling out a red marble?

_____

Is there an even chance of pulling out both a green and black marble?

_____

_____

What is the chance of pulling out a green marble?

_____

Is it possible to pull an orange marble out of the bag?

_____

Is it unlikely that a purple marble will be pulled out of the bag?

_____

What is the probability of not picking a red marble?

_____

_____

I pull out 7 marbles. What colours could I have pulled out?

_____

_____

If I put the 7 marbles back and pull out another 7 marbles will I get the same marble colours again? Why/why not?

_____

_____

_____

_____

Marble Bag Probability - **Answers**

Here is a bag of different coloured marbles.

What is the likelihood of pulling out a red marble?
Unlikely/very unlikely

Is there an even chance of pulling out both a green and black marble?
No there is not an even chance because there are only three red marbles and fifteen green marbles.

What is the chance of pulling out a green marble?
Possible/highly possible/very likely

Is it possible to pull an orange marble out of the bag?
It is impossible because there are no orange marbles in the bag.

Is it unlikely that a purple marble will be pulled out of the bag?
It is possible to pull out a purple marble. There are 5 purple marbles in the bag.

What is the probability of not picking a red marble?
It is likely to pull out a marble that is not red because there are only two red marbles in the bag.

I pull out 7 marbles. What colours could I have pulled out?
(Students' choice. Answers should reflect the numbers of marbles available, e.g. no higher the 2 red marbles and with a higher likelihood of pulling out green.)

If I put the 7 marbles back and pull out another 7 marbles will I get the same marble colours again? Why / why not?
(Students' choice. Answers should reflect the numbers of marbles available, that it is a chance experiment which will result in different outcomes and that there is a higher chance of pulling out green.)