

























# Probability Connect Four

What is the probability of picking....

A red card out of 10 red cards 	A red card out of 3 red and 7 blue cards 	A red card out of 6 green and 4 red cards 	A green card out of 8 red and 2 green cards 	A green or blue card out of 1 blue, 2 green and 7 red cards 	A green card out of 9 green and 1 red card 
A green card out of 2 green and 2 blue cards 	A red card out of 5 green and 5 blue cards 	A red card out of 9 blue and 1 red card 	A red or green card out of 5 red 	A green card out of 1 blue cards 	
A red card out of 9 red and 1 blue card 	A blue card out of 7 green and 3 blue cards 	A green card out of 6 green, 2 red and 1 blue card 	A red or blue card out of 5 green, 3 red and 2 blue cards 		
A red card out of 5 red, 3 blue and 2 green cards 	A red or green card out of 4 green cards 	A blue card out of 5 red and 5 blue cards 	A green card out of 1 blue cards 		
A green or blue card out of 4 green, 5 blue and 1 red card 	A red or green card out of 5 red, 3 green and 2 blue cards 	A blue card out of 8 red and 2 blue cards 			
	A red card out of 10 red cards 	A red card out of 2 green and 8 red cards 			

Probability levels:

- likely
- impossible
- unlikely
- quite unlikely
- very likely
- quite likely
- extremely unlikely
- definite

In daily life we are always working out the probability of certain events happening or not. Playing probability connect four will give pupils practise at calculating their chances of picking different coloured cards from different combinations.

Suitable for pupils aged 8+

The Learning Outcome will be that pupils will have practised working out the probability and chance of picking specific cards out of ten.

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# Probability

## Connect Four

Developed by Steve Cooke

**Theme: Probability**

**Age range: 8+**

**Context:**

In daily life we are always working out the probability of certain events happening or not happening and this is something we practise throughout our lives. In this activity pupils gain an understanding of the relationship of the chance of something happening in relation to numbers out of ten.

For example, if I have ten red cards there is no likelihood of picking a green one; I have a zero probability of it happening and a zero out of ten chance.

If you make your own version please send it to the address below for sharing with others.

**Preparation:**

Print out the A4 sheets.

If possible, laminate the Game Board and Probability Glossary. Cover the pages of the Cards with 'clear pvc self adhesive film'. Then cut out the squares to make the cards.

**HOW TO PLAY:**

For the game you will need four players, one Game Board, two sets of cards (different colour borders) and the Glossary for reference.

Work with a partner to make a team of two.

Shuffle your team cards and place them in a pile face down.

Take turns to turn over your top card and decide where to put it on the board. Everyone has to agree that the card fits the probability. This can be checked by looking at the Glossary.

The team with the first four cards in a line either vertically, horizontally or diagonally wins.

**Learning Outcomes:**

Pupils will have practised working out the probability and chance of picking specific cards out of ten. If you have found further learning outcomes please share them by emailing [collaborate@mantralingua.com](mailto:collaborate@mantralingua.com).

Mantra Lingua Ltd, Global House, 303 Ballards Lane, London N12 8NP 0044 (o) 208 445 5123

(You can purchase a professionally printed, sound-enabled version of this activity with pre-cut cards from [www.mantralingua.com](http://www.mantralingua.com). Students can use PENpal to record and re-record aurally onto the pages and cards. Recordings can be saved and used for assessment, or shared with other classes and schools via "ShareLINK".)

# Probability - Cards

impossible

impossible

impossible

impossible

very unlikely

very unlikely

very unlikely

very unlikely

extremely unlikely

extremely unlikely

extremely unlikely

extremely unlikely

unlikely

unlikely

unlikely

unlikely

quite unlikely

quite unlikely

quite unlikely

quite unlikely

an even chance

# Probability - Cards

definite

definite

definite

very likely

very likely

very likely

extremely likely

extremely likely

extremely likely

extremely likely

likely

likely

likely

likely

quite likely

quite likely

quite likely

quite likely

an even chance

an even chance

an even chance

# Probability - Cards

impossible

impossible

impossible

impossible

very unlikely

very unlikely

very unlikely

very unlikely

extremely unlikely

extremely unlikely

extremely unlikely

extremely unlikely

unlikely

unlikely

unlikely

unlikely

quite unlikely

quite unlikely

quite unlikely

quite unlikely

an even chance

# Probability - Cards

definite

definite

definite

very likely

very likely

very likely

extremely likely

extremely likely

extremely likely

extremely likely

likely

likely

likely

likely

quite likely

quite likely

quite likely

quite likely

an even chance

an even chance

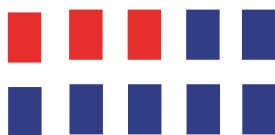
an even chance

What is the probability of picking....

A red card  
out of 10 red cards



A red card  
out of 3 red and  
7 blue cards



A red card  
out of 6 green and  
4 red cards



A green or blue card  
out of 3 green,  
2 blue and 5 red cards



A red card  
out of 7 red and  
3 blue cards



A red card  
out of 5 green and  
5 blue cards



A red card  
out of 9 red and  
1 blue card



A blue card  
out of 7 green and  
3 blue cards



A green card  
out of 6 green,  
3 red and 1 blue card



A red card  
out of 5 red, 3 blue  
and 2 green cards



A blue card  
out of 5 red, 1 green  
and 4 blue card



A blue or red card  
out of 4 blue, 4 green  
and 2 red cards



A green or blue card  
out of 4 green,  
5 blue and 1 red card



A blue card  
out of 5 red, 4 green  
and 1 blue card



A red or green card  
out of 5 red, 3 green  
and 2 blue cards



A blue or red card  
out of 3 blue, 1 red  
and 6 green card



A blue card  
out of 6 blue and  
4 red cards



A red card  
out of 10 red cards



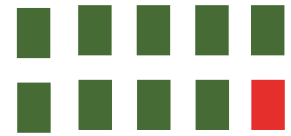
A green card  
out of 8 red and  
2 green cards



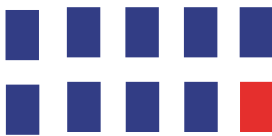
A green or blue card  
out of 1 blue, 2 green  
and 7 red cards



A green card  
out of 9 green and  
1 red card



A red card  
out of 9 blue and  
1 red card



A red or green card  
out of 5 red  
and 5 green cards



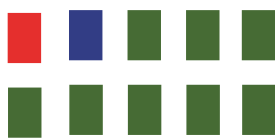
A green card  
out of 2 red, 1 blue  
and 7 green cards



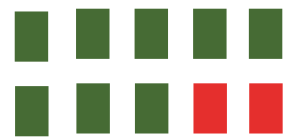
A red or blue card  
out of 5 green, 3 red  
and 2 blue cards



A red or a blue card  
out of 1 red, 1 blue  
and 8 green cards



A green card  
out of 8 green  
and 2 red cards



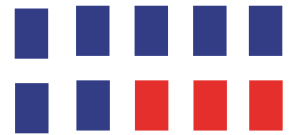
A blue card  
out of 5 red  
and 5 blue cards



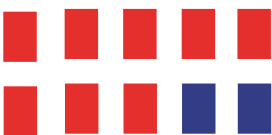
A green card  
out of 10 green cards



A green card  
out of 7 blue  
and 3 red cards



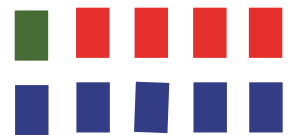
A blue card  
out of 8 red  
and 2 blue cards



A blue or green card  
out of 4 blue, 3 green  
and 3 red cards



A green card  
out of 1 green, 4 red  
and 5 blue cards



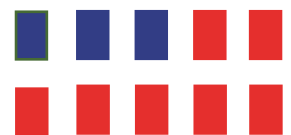
A red card  
out of 2 green  
and 8 red cards



A red card  
out of 4 red  
and 6 green cards



A green card  
out of 3 blue  
and 7 red cards





Description	Chance	Probability
impossible	0 in ten	0
extremely unlikely	1 in ten	0.1
very unlikely	2 in ten	0.2
unlikely	3 in ten	0.3
quite unlikely	4 in ten	0.4
an even chance	5 in ten	0.5
likely	6 in ten	0.6
quite likely	7 in ten	0.7
very likely	8 in ten	0.8
extremely likely	9 in ten	0.9
definite	10 in ten	1