

# Monopoly Mayhem

The game of Monopoly was created in 1935. Since then it has been published in 37 languages and is available in 103 countries across the world. 200 million sets have been sold and it is estimated that there is 300 billion pounds of Monopoly money in UK homes [http://www.hasbro.com/monopoly/en\\_GB/discover/about.cfm](http://www.hasbro.com/monopoly/en_GB/discover/about.cfm). For those of you who have never played, you move around a board with the option to purchase the property that you land on. As a property tycoon you are trying to bankrupt your fellow players and take home all the money.

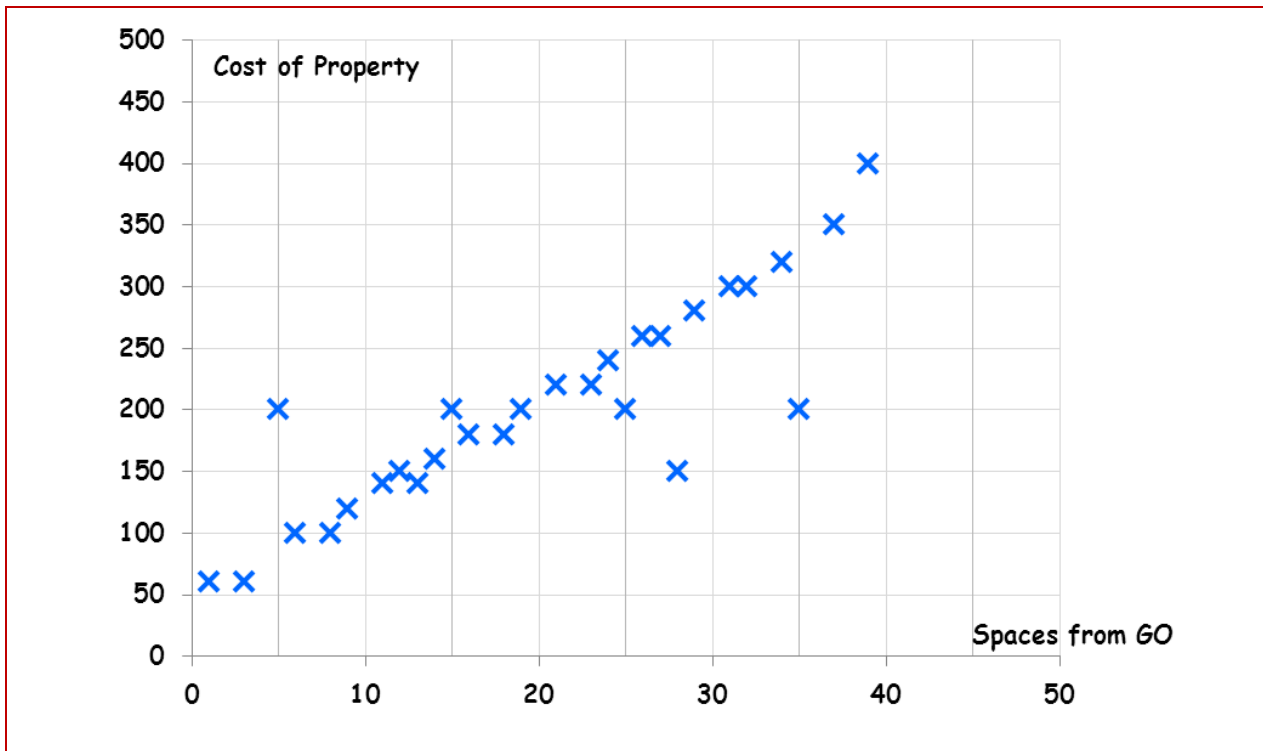
Property	Spaces from Go	Cost
Old Kent Rd	1	£60
Whitechapel Rd	3	£60
Kings Cross Station	5	£200
The Angel, Islington	6	£100
Euston Rd	8	£100
Pentonville Rd	9	£120
Pall Mall	11	£140
Electric Company	12	£150
Whitehall	13	£140
Northumberland Ave	14	£160
Marylebone Station	15	£200
Bow Street	16	£180
Marlborough St	18	£180
Vine St	19	£200
The Strand	21	£220
Fleet St	23	£220
Trafalgar Square	24	£240
Fenchurch St Station	25	£200
Leicester Square	26	£260
Coventry St	27	£260
Water Works	28	£150
Piccadilly	29	£280
Regent St	31	£300
Oxford St	32	£300
Bond St	34	£320
Liverpool St Station	35	£200
Park Lane	37	£350
Mayfair	39	£400



The properties vary in price. The more illustrious locations, like Park Lane, will, of course, cost you more. Looking at the table opposite, can you see a relationship between the spaces from GO and how much the property costs? One way of displaying this information is to plot a scatter diagram. It clearly shows any patterns or trends in the data and helps you describe the relationship between two variables (the things you are comparing – see axes labels). Either plot this yourself, or use the graph ready prepared on the next page.



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Can you see a relationship between 'Spaces from GO' and the 'Cost of Property'? Write a sentence to describe it. Are there any points which do not seem to fit the trend?

Without looking at the table can you guess which properties they are?

In order to show the trend more clearly we can draw on the graph a 'Line of Best Fit', or 'Trend Line'. Draw a line on your graph (or on the one above) which best fits the points. We use this line to make estimates. For example, if you put a property 22 spaces away from GO, how much do you think it should cost?

Why would this only be an estimate?

All straight lines can be written in the format  $y=mx+c$ . This describes the relationship between the x axis variable and the y axis variable. Find out what the 'm' and 'c' mean and try to calculate the equation of your Line of Best Fit.

You can use this equation to help you predict what might happen.

Use your equation to find out the cost of a property that is 50 spaces away from GO. Why might this not be right? What assumptions would you be making?

In Monopoly you throw two dice for your turn. On your first go, how many spaces from 'GO' are you most likely to end up?

Why? The makers, Hasbro, tell us that the most landed on properties are Bow Street, Vine Street and Marlborough Street (the orange ones). Can you think why? Discuss this with your class.

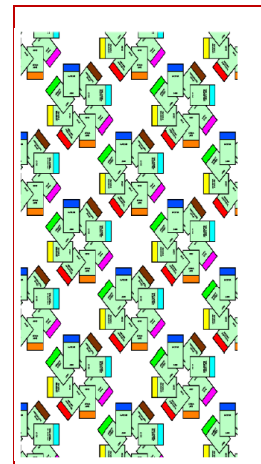
There are 10 tokens that represent the players on the board.

Discuss or use this link to find out what they are:

[boardgames.about.com/od/monopolyfaq/f/tokens.htm](http://boardgames.about.com/od/monopolyfaq/f/tokens.htm).

If you had first choice at the start of the game, and you picked one at random, what is the chance of you picking an animal?

Would this probability be the same if you were choosing for yourself? Why?





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## Headline from Mail Online

'Go back to Vine Street... Do not collect £200m: How the London Monopoly board would look in 2011'

'Monopoly was designed 75 years ago, so what would happen if the property sites were redrawn at today's values?'

[www.dailymail.co.uk/home/moslive/article-1393521/How-London-Monopoly-board-look-2011-Do-collect-200m.html#ixzz1U35pIZ6W](http://www.dailymail.co.uk/home/moslive/article-1393521/How-London-Monopoly-board-look-2011-Do-collect-200m.html#ixzz1U35pIZ6W)

This article gives an image of a monopoly board using today's property prices.

Property	Cost of Property in 1936 (£s)	Cost of Property in 2011 (£1,000,000s)	Spaces from GO
Old Kent Road	60	208	1
Whitechapel Road	60	81	3
Kings Cross Station	200	1000	5
The Angel, Islington	100	91	6
Euston Road	100	404	8
Pentonville Road	120	215	9
Pall Mall	140	228	11
Electric Company	150	12400	12
Whitehall	140	211	13
Northumberland Street	160	112	14
Marylebone Station	200	500	15
Bow Street	180	71	16
Marlborough Street	180	125	18
Vine Street	200	15	19
The Strand	220	320	21
Fleet Street	220	148	23
Trafalgar Square	240	97	24
Fenchurch Street Station	200	700	25
Leicester Square	260	68	26
Coventry Street	260	57	27
Water Works	150	8000	28
Piccadilly	280	440	29
Regent Street	300	370	31
Oxford Street	300	550	32
Bond Street	320	271	34
Liverpool Street Station	200	1500	35
Park Lane	350	562	37
Mayfair	400	1800	39

Is there a linear (straight) relationship between the 'Cost of Property in 2011' and 'Spaces from GO'?

Are there any outliers? What are these and comment on whether these should be included in the analysis.