

Two Way Table Challenge

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Question 1

There are 200 people in a company. Information is collected about the people and some of the data is shown below

Gender/Hand	Right Handed	Left Handed	Total
Male		37	79
Female			
Total	143		

- (1) Complete the table
- (2) Using the table, find the probability of the following events:
 - (a) A man being chosen
 - (b) A left handed woman being chosen
 - (c) A dog being chosen
 - (d) A left handed person being chosen
 - (e) Two people taken and them both being left handed
 - (f) Picking 3 men and not letting them return!

Question 2

In a game counters have a number on. The counters are either black or red. The probability of a 'Black and Even' is the same as a 'Red and Even'. The 2 way table shows and **exhaustive list** of outcomes.

Event	Black	Red	Total
Odd	x	2x	
Even		x	
Total			

- (1) Complete the table
- (2) **Using numeric values** find the probability of the following events (assume there are 50 counters for the questions below):
 - (a) Choosing one item and it being Black and Even
 - (b) Choosing a Black
 - (c) Picking 2 counters out and them being Black and Black (with replacement)
 - (d) Picking 2 counters out and them being Black and Black without replacement
 - (e) Picking one counter and it being Red **or** Black
 - (f) Picking an Odd counter
 - (g) When 2 counters are pulled out they are different colours (with replacement)

Question 3

Design your own two way table and see how little information you can add before it becomes unsolvable. Aim to have 2-3 items in each column.

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Gender/Hand	Right Handed	Left Handed	Total
Male	42	37	79
Female	101	20	121
Total	143	57	200

Event	Black	Red	Total
Odd	x	2x	3x
Even	x	x	2x
Total	2x	3x	5x

$5x = 1$
 $x = 1/5$ or 0.2

Event	Black	Red	Total
Odd	0.2	0.4	0.6
Even	0.2	0.2	0.4
Total	0.4	0.6	1