

## Listing Possible Outcomes

### Starter

- (Review of last lesson)** Tara asked 150 people in Ripon whether they were vegetarian and 9 responded that they were.

  - State the relative frequency of the vegetarians in Ripon based on Tara's data.
  - There are 16000 inhabitants in Ripon. Estimate how many vegetarians there are.
  - Suggests reasons why your answer to (b) is incorrect.
- Two dice are rolled and the difference between the values is found.
  - Copy and complete the sample space diagram below to show all outcomes.

DIFFERENCE		DICE 2					
		1	2	3	4	5	6
Dice 1	1	0					
	2			1		3	
	3						
	4						
	5	4					
	6				2		

- Using your sample space diagram, calculate the probability of getting:
  - a difference of zero
  - a difference of 1 or 2
  - a difference which is greater than 1

### Notes

For a sample space diagram to work each of the outcomes in the table must be equally likely. For example, the probability of rolling a 1 is the same as rolling a 6.

**N.B.** A sample space diagram can also be called a probability table.

Video: [Listing outcomes](#)  
Video: [Sample space diagrams](#)

[Solutions to Starter and E.g.s](#)

### Exercise

9-1 class textbook: p238 M8.4 Qu 1-8  
 A\*-G class textbook: p208 M8.4 Qu 3-10  
 9-1 homework book: p81 M8.4 Qu 1-5  
 A\*-G homework book: p59 M8.4 Qu 1-5

### Summary

For a sample space diagram to work, each of the outcomes in the table must be equally likely.

[Homework book answers \(only available during a lockdown\)](#)