

SURVEYING THE SCHOOLYARD

In this task you will be calculating the probability of seeing a living thing based on two attributes:

1. Is it smaller or bigger than a 50 cent piece? (Smaller could be an ant, while bigger could be a bird.)
2. How many legs does it have? For example - 0 (e.g. worm), 2 (e.g. bird), 4 (e.g. cat), 6 (e.g. beetle), 8 (e.g. spider)

Begin by listing all the possible outcomes using a two-way table. This has been started for you below:

Table 1. Two-way table

	NUMBER OF LEGS				
SIZE	0	2	4	6	8
Small (S)	S,0	S,2	S,4	S,6	S,8
Big (B)	B,0	B,2	S,4	S,6	B,8

Use a tree diagram to represent the situation shown in Table 1:

How many possible outcomes are there?

SURVEYING THE SCHOOL YARD

Take some time to observe your schoolyard walk around and record the living things you see. You can use this table to record your observations. Try to record as much as you can. In most cases the more you record, the more reliable your results will be!

Table 2: Results of observations

Possible Outcomes	Tally	Frequency	Probability	Example of living thing
S,0				
B,0				
S,2				
B,2				
S,4				
B,4				
S,6				
B,6				
S,8				
B,8				
Total frequency:				

SURVEYING THE SCHOOL YARD

Answer the following questions based on your results from Table 2:

1. What was the most probable outcome?

2. What was the least probable outcome?

Find:

3. Pr(something with more than 2 legs)

4. Pr(something bigger than a 50 cent piece with less than 4 legs)

5. Pr(something smaller than a 50 cent piece)

6. Pr(something bigger than a 50 cent piece)

7. Pr(bigger than a 50 cent piece with 6 legs or something living with 0 legs)

If you were to record 100 observations in the same way how many would you expect to be:

8. Smaller than a 50 cent piece?

9. Smaller than a 50 cent piece with 4 legs?

10. Bigger than a 50 cent piece with 6 or more legs?

PAGE 3.