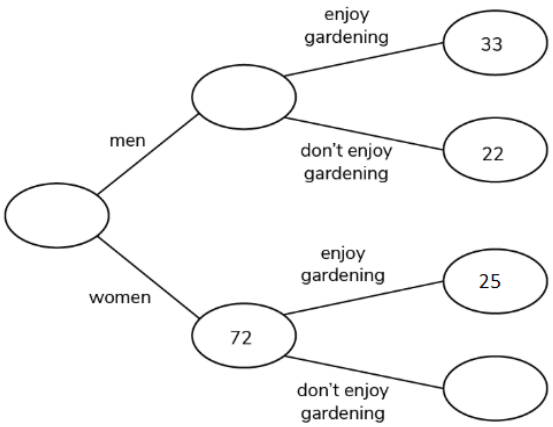
Basic Probability! – www.m4ths.com – Steve Blades

(1) The frequency tree below shows the results of a survey into people's gardening habits.



(a) Complete the frequency tree
(b) One person is chosen at random. Fond the probability that they are a woman who enjoys gardening.
(c) A MAN is chosen at random. Find the probability he doesn't enjoy gardening.

(2) Fred is in a restaurant. There are 3 starters, 6 mains and 8 desserts on the menu. Fred wants one of each. How many possible combinations are there for him to choose from?

(3) 40 boys and a number of girls were asked about whether they worked or went to school. The partly complete two-way table shows some information below. Study the table below and answer the questions.

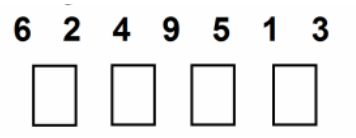
	Has a full time Job	Goes to school	Total
Boys	10		
Girls		8	
Total			50

(a) How many girls in the survey had a full-time job?
(b) What percentage of the total number asked were boys who went to school?
(c) What fraction of the total people surveyed were girls who went to school?
(d) One boy is chosen at random. What is the probability that he had a full-time job?
(e) One person is chosen from random. Write down the probability of that person being a boy who didn't go to school.

(4) Peter has a spinner with 4 sections on it. If the spinner is fair what will be the probability of landing on any one of the 4 sections?

(5) Jim plays pool. The probability of winning any given match is 0.2. If he plays 460 matches, how many would you expect him to lose?

(6) Bob has 4 cards as shown below. He has to make as many 4-digit numbers as possible. He can only use the numbers below. He can only use each number from the list once.



(a) How many different 4-digit numbers can he make?
(b) How many 4-digit numbers can he make that are more than 2000?

(7) Paulo flips a coin 320 times and it lands on heads 152 times.

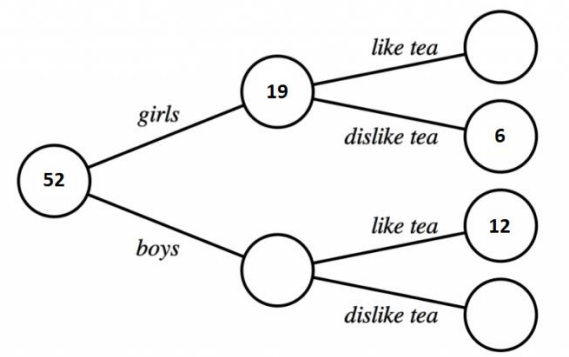
(a) Is it fair to say the coin is fair?
(b) What should Paulo do to see if it is fair?

(8) Janet has a 5-sided spinner. The probability of each colour is shown in the table below

Colour	Black	Yellow	Blue	Red	Orange
Probability	0.2	N	2N	0.1	0.1

(a) Find the value of N
(b) Is the spinner fair or biased? How do you know
(c) The spinner is spun 850 times. How many times would you expect it to land on blue?

(9) The frequency tree shows information about whether or not some boys and girls liked tea.



(a) Complete the frequency tree.
(b) What proportion of the people are boys who liked tea?
(c) One person is chosen at random, find the probability of it being a girl who liked tea.

(10) Peter has a combination lock. The lock has 4 dials and each dial has the digits 1-6. How many different combinations can he make for his code?

(11) Fred can either win or lose at a game. The probability of him winning is 4/5. If he plays 900 games, how many would you expect him to lose?

(12) In a bag there are 48 red counters and 39 blue counters in a bag. Find the relative frequency of each colour.

(13) How many different 4-digit even numbers can be made from the digits 7, 8, 1 and 3. You can't use the numbers more than once.

(14) The two-way table below shows how the boys and girls in a school travelled to school.

	Walk	**Car**	**Other**	**Total**
Boy	15		14	54
Girl			16	
Total	37			100

(a) Complete the two-way table
(b) One person is chosen at random. Find the probability that they were a boy who walked.
(c) One Boy is chosen at random, find the probability that arrived by car.