

# Assignment 5

Show all your work

Name: \_\_\_\_\_  
 Number: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Score: \_\_\_\_/10

**Problem 1:** Answer each question to two decimal place accuracy when appropriate. If an exact answer is possible expressed as a fraction, you may leave your answer as a fraction.

- a. If James draws a single card from a deck of 52 cards, what is  $P(X = \text{"face card"})$ ?

$$\frac{3}{13}$$

- b. Suppose a blue cubic die and a green cubic die are rolled, find  $P(X_b + X_g = \text{"odd"})$ .

+	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

$$\frac{18}{36} = \frac{1}{2}$$

- c. When you flip a fair coin three times, what is the probability of getting no heads?

$$\frac{1}{8}$$

$$(1/2)^3 = 1/8.$$

Score: /3

**Problem 2:** A survey is conducted among students and faculty at Capilano University regarding having food trucks on campus. If a student is randomly selected, what is the probability that the student is for having food trucks on campus? Find totals as part of your steps.

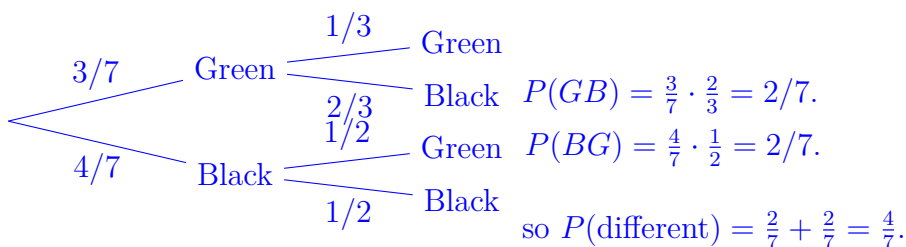
Capilano University Survey			
	For Food Trucks	Against Food Trucks	Total
Students	537	311	848
Faculty	59	77	136
Total	596	388	984

$$\frac{537}{848} = 63\%$$

Score: /2

**Problem 3:** A pot contains 3 green balls and 4 black balls. Hamlet draws two balls out of the pot without replacement. Draw a probability tree for drawing two balls without replacement. (2 points)

- a. Find the probability of getting two different coloured balls.



- b. Find the probability of getting no green balls.

$$P(BB) = \frac{4}{7} \cdot \frac{1}{2} = \frac{2}{7}$$

Score: /5

$$/10$$