

Name

Give your working and answers below the questions, using extra sheets if necessary.

Date Due: 21st January 2019

Hand in your solutions to both problems at your tutorial

- (1). [5 marks] A small petting zoo is made with 4 goats, 6 ponies, 3 wallabies, 7 rabbits and 3 sheep. You have 7 goats, 7 ponies, 8 wallabies, 10 rabbits and 5 sheep. How many different petting zoos can you make?

over please

(2). [5 marks] A die has faces numbered 1 to 6 and is weighted so that the probability of throwing n ($n = 1, 2, 3, 4, 5, 6$) in a single throw is proportional to n ; that is, equals to λn for some constant λ .

- (a) Find λ .
- (b) Compute the probability of throwing an odd number.
- (c) Compute the probability of throwing a number greater than 4.