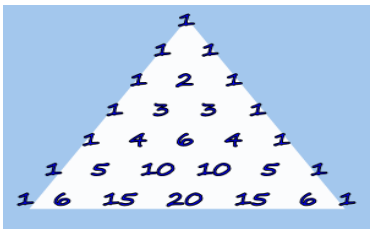
Week 6/7
Term 3
2018

Learning Brief

SMM4

Goals



Unit goals

- Understand the concepts and techniques in statistics
- Solve problems in statistics
- Interpret and evaluate mathematical and statistical information

By the end of this week, you should be able to:

- understand Binomial theorem and Binomial Probability Distribution
- recognise situations when the Binomial distribution applies and learn how to solve problems involving the Binomial Distribution
- recognise and use the formula and CAS for binomial probabilities
- understand the assumptions on which the binomial model is based

Theoretical Components

Make sure you do Part A first so that you can work through binomial expansions (leading to Pascal's Triangle)

PART A:
Reasoning and Data (Fitzpatrick et. al.):
- Read Section 4.1 on Binomial Theorem
- Read Section 4.2 on Binomial Probability Distribution

PART B:
You will require Chapter 11 (Chap 11 on Google Classroom)
Read through Section 11A & 11B on Binomial Distributions.

Note: You can use CAS for many of these questions.

Main→Interactive→Distribution→Discrete→ binomialPDf

If solving 'at least' or 'no more than' ie a range of values, use binomial CDf.

Make sure you are confident about the following key concepts:

- Bernouli trials and sequences
- Binomial expansions
- Notation used in binomial expansions
- Multiple probabilities

Practical Components

Do the following questions.

PART A:
Reasoning and Data (Fitzpatrick et. al.):
Ex. 4a Questions 1 (a), 2, 5,(a) (b), 6 (a) (c), 7(a), 10.
Ex 4b Questions Q1 to Q7, Q9, Q14, Q17, Q19, Q22 to Q25, Q28, Q29, Q32, Q34 to Q37

PART B:
Chap 11
Ex 11A: 3,5,7,11,14,15,23,29.
Ex 11B: 2,4,7,9,11,13,21,22,28

Investigation

On HawkerMaths.

Quiz

None this week