

Goals



Unit goals for Mathematical Methods:

- understand the concepts and techniques in algebra, functions, graphs, trigonometric functions and probability
- solve problems using algebra, functions, graphs, trigonometric functions and probability
- apply reasoning skills in the context of algebra, functions, graphs, trigonometric functions and probability
- interpret and evaluate mathematical information and ascertain the reasonableness of solutions to problems
- communicate their arguments and strategies when solving problems.

This week:

- Number review
- Introduction to counting principles

Theoretical components

Knowledge checklist:

- Number systems
- Set, subset and universal set
- Venn diagram
- Counting principles – addition and multiplication
- Permutations
- Factorials

View the following websites and make notes:

Language and notation of probability:

<https://mathspace.co/textbook/subtopic/246526/lessons>

Counting Principles:

<http://www.coolmath.com/algebra/20-combinatorics/01-counting-principals-01>

<https://www.khanacademy.org/math/probability/probability-and-combinatorics-topic/permutations-and-combinations/v/permutations>

Practice Questions:

https://www.khanacademy.org/math/probability/probability-and-combinatorics-topic/permutations-and-combinations/e/permutations_1

Practical components

You will require Chapter 12 of Maths Quest 11 Mathematical Methods (pdf - Google Classroom)
Do the following questions. Organise your solutions neatly in your exercise book:

EX 12A: 1– 6, 10 –15

EX 12B: 1, 3, 5, 7, 9, 10, 18, and 19

EX 12C: 6 –10

Attempt these questions:

- See handout – Set Notation

Exercise 2A and 2B

Investigation

Prime factorisation

View the following website and investigate prime factors, greatest common factor and lowest common multiple.

<http://www.mathplayground.com/factortrees.html>

Answer the following, showing working:

- What is the prime factorisation of 84?
- What is the prime factorisation of 72?
- What are the GCF and the LCM of 84 and 72?

QFO

Quiz/Forum/Other

There will be a task on www.mathspace.co for you to complete on week 2.

Remember to check hawkermaths.com for each week's learning brief.