

Goals

Welcome to Year 12. This week we are:

- Reviewing rate of change, gradient and key features of graphs
- Reviewing differentiation using power rule



Theoretical Components

STEP 1

Resources:

- Maths Quest Year 12 Chapter 7

Knowledge Checklist from last year:

- what is a rate?
- constant rates
- variable rates
- average rates of change
- instantaneous rates of change
- interpret graphs that illustrate rates of change
- equations of tangents/normals
- what is a limit?
- evaluating limits
- what is a gradient function?
- what is the x-intercept of a gradient function?
- power rule
- finding gradient functions by sketching
- finding gradient functions by using the rule
- finding gradient functions using your CAS
- sketching polynomials using stationary points
- finding maximum and minimum points and to solve problems in a practical context
- investigate speed, displacement and velocity
- primitive functions and applications

View mathspace.co lessons

<https://mathspace.co/teach2/chapter/38952/1963/>

<https://mathspace.co/teach2/chapter/38955/1954/>

Practical Components

STEP 2

Worksheet (Differentiation – Power, Constant, and Sum Rules)

On mathspace.co there are two custom tasks for you to complete (15 questions each):

1. Differentiation – Review Rate of Change
2. Differentiation – Simple Applications

Investigation

STEP 3

As it is orientation week go to every timetabled lesson. There will be no investigation for this week that will count towards one hour.

Remember to scan in and to scan out.