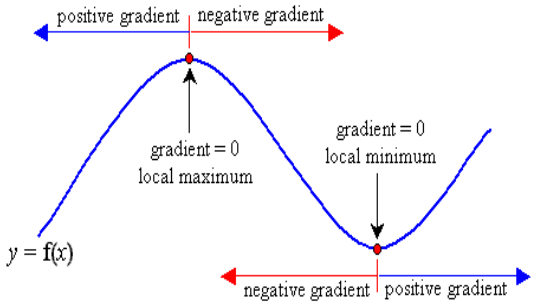
Week 13/14
Term 4
2024

HAWKER COLLEGE
Engage | Inspire | Achieve

Learning Brief
MM2

Goals



By the end of this fortnight, you will:

- Finding the stationary points of polynomial functions $f'(x) = 0$
- Sketching graphs of polynomial functions using gradient function
- Classifying the type of stationary points: local maximum or minimum turning point, point of inflection
- Using differentiation to find maximum and minimum values and to solve problems in a practical context
- Sketching functions using the derivative

Theoretical Components

Knowledge Checklist:

- what is the x-intercept of a gradient function?
- power rule
- finding gradient functions by sketching
- finding gradient functions by using the rule
- sketching polynomials

Online Resources:

- https://www.youtube.com/watch?v=H-XDX7T0ADw
- https://www.youtube.com/watch?v=HMhmC9rLzew
- https://www.youtube.com/watch?v=cdVq028miuk
- https://www.youtube.com/watch?v=YWvpnY2R9PY

Practical Components

Resources:
Make notes on the following chapters and websites:
Chapter 9 of Maths Quest 11 Mathematical Methods (pdf – Google Classroom)

- 9F - Sketching graphs containing stationary points
- 9G - Solving maximum and minimum problems

Do the following questions:
Organise your solutions neatly in your exercise book.
Chapter 9 of Maths Quest 11 Mathematical Methods (pdf – Google Classroom)

- 9F: 1a, 1c, 1e, 1h, 2a, 2c, 2e, 2h, 3, 6, 7, 9, 10, 11a, 11c, 11e, 14
- 9G: 1, 3, 6-8, 10-11, 13-14

Investigation

In-Class task to be held during Week 13 in your double lesson worth 20%

Other

The in-class task will be on everything from Week 7 to Week 12 brief and you will need to come prepared. You will be allowed to bring in your notes and worked exercises since Week 7 and, of course, your calculator. You need to bring pens, pencils, highlighters, rulers and erasers.