NCEA Level 3 Calculus (Differentiation)

6. Tangent and Normal Lines (Homework)

Reading

Go and watch...

https://www.youtube.com/watch?v=6sNeE-mMYB8

Questions

- 1. Write a definition for the normal line to a curve f at a point (x_0, y_0) .
- 2. Find the best linear approximation to the curve $y = \sqrt{\cos(x+\pi)} + \sin x e^{2(\tan x)^2}$ at the point $(\pi,0)$.
- 3. Find a function such that the normal line to the function at (1,0) has the equation y=3x-3.
- 4. Find a linear approximation to the curve $y = \sqrt[3]{1+3x}$ around x = 0, and determine an approximate value for $\sqrt[3]{1.03}$.