NCEA Level 3 Calculus (Integration)
16. Anti-differentiation (Homework)

Reading

Questions

1. Find the most general antiderivative.

   (a) $f(x) = x - 3$

   (b) $f(x) = (x + 1)(x + 2)$

   (c) $f(\theta) = 6\theta^2 - 7\sec^2 \theta$

   (d) $g(h) = \pi^2$

   (e) $f(x) = x^{3.7} + \sqrt{x} = 7x^{\sqrt{7}-1}$

2. Given that the graph of ϕ passes through the point $(1, 6)$ and that the slope of its tangent line at $(x, f(x))$ is $2x + 1$, find $f(2)$.

3. This is the second derivative of g. Find g given that $g'(0) = 0$ and $g(0) = 1$.