

Name: _____

Differentiation by First principals

Example

1. Using first principles, find the derivative of the following functions.

(a) $f(x) = 13$.

(b) $f(x) = 3x$.

(c) $f(x) = x$.

(d) $f(x) = 5x + 6$.

(e) $f(x) = x^2$.

(f) $f(x) = 3x^2 - 5$.

(g) $f(x) = 2x^2 + 3x$.

(h) $f(x) = x^2 + 4$.

(i) $f(x) = 3x^2 - 4x + 7$.

(j) $f(x) = x^2 + 3x - 1$.

(k) $f(x) = \frac{1}{x}$.

(l) $f(x) = \frac{1}{x^2}$.
