

Calculate the derivatives of the following functions:

(a) $f(x) = x^2 + 3x + 1$ at $x = 0$

(b) $f(x) = 1 + x + x^2 + x^3 + \dots$ at $x = 0$

(c) $f(x) = x^2 + 3x + 1$ at $x = 1$

(d) $f(x) = x^2 + 2x + 1$ at $x = -3$

(e) $f(x) = |x + 5|$ at $x = 0$

(f) $f(x) = |x + 5|$ at $x = -10$

(g) $f(x) = |x^2 - x - 1|$ at $x = 1$

(h) $f(x) = |x^2 - x - 1|$ at $x = 2$