

1. p25e16 - Calcula las siguientes derivadas:

(a) $y = 2x$

Sol: $y' = 2$

(b) $y = 3x - 5$

Sol: $y' = 3$

(c) $y = 2x^2 - 7x + 5$

Sol: $y' = 4x - 7$

(d) $y = 7x^5 - 3x^2 + x + 2345$

Sol: $y' = 35x^4 - 6x + 1$

(e) $y = x(x + 2)$

Sol: $y' = 2x + 2$

(f) $y = (x - 1)(x + 1)$

Sol: $y' = 2x$

(g) $y = \frac{5x^4}{7} - \frac{x^3}{55} - \frac{3x^2}{4} + x - 1255$

Sol: $y' = \frac{20x^3}{7} - \frac{3x^2}{55} - \frac{3x}{2} + 1$

(h) $y = (x + 1)^3$

Sol: $y' = 3(x + 1)^2$

(i) $y = (x^3 + x + 1)^4$

Sol: $y' = (12x^2 + 4)(x^3 + x + 1)^3$

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

Sol: $y' = 12$

(k) $y = \frac{1}{x^2}$

Sol: $y' = -\frac{2}{x^3}$

(l) $y = \frac{1}{x+1}$

Sol: $y' = -\frac{1}{(x+1)^2}$

(m) $y = \frac{x^2-3}{x^3+x}$

Sol: $y' = \frac{-x^4+10x^2+3}{x^2(x^4+2x^2+1)}$

(n) $y = \frac{x+1}{x}$

Sol: $y' = -\frac{1}{x^2}$

(ñ) $y = \frac{x(x^2-1)}{3x^2-3}$

Sol: $y' = \frac{1}{3}$