

Mathematics

HOMEWORK FOR L4 ALL

1. Find the derivative of the following functions:

a) $y = x^2 + 2x + 1$

j) $y = x + \sqrt{x} + \sqrt[3]{x} + \sqrt[5]{x}$

b) $y = 4x^3 - 3x^2 + 2x - 1$

k) $y = \sqrt[3]{x^8} - \sqrt[4]{x^7} + \sqrt[5]{x^6}$

c) $y = \frac{1}{4}x^4 + \frac{1}{3}x^3 + \frac{1}{2}x^2$

l) $y = \frac{1}{\sqrt[3]{2x^4}} - \frac{1}{\sqrt[4]{2x^3}}$

d) $y = -\frac{5x^8}{9} - \frac{8x^7}{13} - \frac{9x^6}{16}$

m) $y = \frac{\sqrt[5]{4x}}{5} + \sqrt[4]{\frac{1}{x^3}}$

e) $y = (3x - 5)^3$

n) $y = \sqrt{x^5} - \sqrt[4]{x^9}$

f) $y = (\sqrt{x} - 1)^2 - (x^2 + 1)^4$

o) $y = \sqrt{x\sqrt{x}} + \sqrt[3]{x^2\sqrt{x^3}}$