

Question 1

(8 marks)

For the functions below, determine $\frac{dy}{dx}$. You do not need to simplify your answers.

(a) $y = 5 + 4\sqrt{x} - \frac{10}{x^3}$.

(2 marks)

$$(b) \quad y = \frac{e^{0.5x}}{0.7x + e^x}.$$

(3 marks)

(c) $y = \ln(x^2 \sqrt{1-4x})$.

(3 marks)