

Advanced Higher Maths
SQA 2021 Paper 1
Question 1



(a) Differentiate $y = x^3e^{5x}$. 2

(b) Given $y = \frac{\tan x}{x^6+1}$, find $\frac{dy}{dx}$. 2

Answers:

(a) $3x^2e^{5x} + 5x^3e^{5x}$

(b)
$$\frac{(x^6 + 1)\sec^2 x - 6x^5 \tan x}{(x^6 + 1)^2}$$