

Find a derivative $y'(x)$ for each of these expressions. You are advised to *carefully choose* a method appropriate to each expression.

(a) $y = \sin(e^{3x} + 2x)$.

(b) $y = e^{-x} \tan x$.

(c) $y = \frac{\arctan(x)(x-1)^2 e^{x^2}}{(\sin x + 2)^3}$.

(d) $x^2 y - xy^2 = \sin(xy)$.