

## Quiz 9

$$\downarrow (a) \quad f'(x) = 9x^8 - 21x^2$$

$$(b) \quad f'(x) = \frac{-16}{x^3} - 4x^{-2/3}$$

$$(c) \quad f'(x) = (9x^2 + 4x)e^x + (3x^3 + 2x^2)e^x \\ = (3x^3 + 11x^2 + 4x)e^x$$

$$(d) \quad f'(x) = \frac{e^x(9x^2 + 4x) - e^x(3x^3 + 2x^2)}{(e^x)^2} = \\ \frac{e^x(-3x^3 + 7x^2 + 4x)}{(e^x)^2} = \\ \frac{-3x^3 + 7x^2 + 4x}{e^x}$$