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Part time maths friday afternoon's

Maths Exam 1 06/11/2020 @ 13:30.

Question 1

i) $y = 8x^3 - 2x^2 - x + 1$ Power rule.

$$\frac{dy}{dx} = 8(3x^2) + -2(2x) + -1x + 0$$

$$= 24x^2 - 4x - 1 + 0$$

$$= 24x^2 - 4x - 1$$

$$\frac{dy}{dx} = 24x^2 - 4x - 1$$

ii) $y = -3(x-5)^2$

$$\frac{dy}{dx} = -3\left(\frac{d}{dx} x - 5^2\right)$$

$$= -3(2x - 5)$$

$$= -6x + 3 \times 2 \times 5$$

$$= -6x + 30$$

iii) $y = \frac{7}{x^3} + 4e^{3x}$

sum

$$\frac{dy}{dx} = \left(\frac{7}{x^3} + 4e^{3x}\right)$$

$$= \frac{-21}{x^4} + 4e^3$$

$$= \frac{4e^3 x^4 - 21}{x^4}$$