

11:00 am

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AEHA4000/ACMA4006

1910311 (Jacob James)

Question 2

a) i) $y = 8x^3 - 2x^2 + x + 10$

$$\left(\frac{dy}{dx} = 24x^2 - 4x + 1 \right) = \underline{\underline{20x^2 + 1}}$$

ii) $y = (5x - 3)(6x - 1)$

$$y = 5(6x - 1) + 6(5x - 3)$$

$$\left(\frac{dy}{dx} = 60x - 23 \right)$$

iii) $y = \frac{3}{\sqrt{x}} + \ln x$

2

iii) iv) $y = 5 \sin \frac{x}{2} - 6 \cos 3x - \tan \frac{x}{-3}$