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12:00

Arturo's Vitrus
190,37,92

[Pg. 1]
ACHA4000

Question (3)

a) i) $\int (x^5 - 2x)(5x^3 + 6x) dx$

~~$\int 5x^8 + 6x^6 - 10x^4 - 12x^2 dx$~~

$= \int 5x^8 + 6x^6 - 10x^4 - 12x^2 dx$

$= \int 5x^8 dx + \int 6x^6 dx - \int 10x^4 dx - \int 12x^2 dx$

$= \frac{5x^9}{9} + \frac{6x^7}{7} - 2x^5 - 4x^3$

$= \frac{5x^9}{9} + \frac{6x^7}{7} - 2x^5 - 4x^3 + C$

ii) $(e^{5x} + 1)(e^{3x} + 2) dx$

$= dx(e^{8x} + 2e^{5x} + e^{3x} + 2)$

$= e^{8x} dx + 2e^{5x} dx + e^{3x} dx + 2dx$

iii) ~~$\int_0^2 (3x^3 + 2x)^3 + 4x + 3 dx$~~