

bii) $\int_1^2 3x e^{2x} dx$

$$= \left[\frac{3x^2}{2} \times \frac{1}{2} e^{2x} + C \right]_1^2$$

$$\left[\frac{3 \times 2^2}{2} \times \frac{1}{2} e^{2 \times 2} + C \right] - \left[\frac{3 \times 1^2}{2} \times \frac{1}{2} e^{2 \times 1} + C \right]$$

$$81.89723 - 5.54179 = 76.3554$$

ci) $\int \frac{21x^2 + 10x - 3}{7x^3 + 5x^2 + 3x - 1} dx$

$$\frac{21x^3}{3} + \frac{10x^2}{2} - 3x$$

+ C

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

$$7x^3 + 5x^2 - 3x$$

+ C

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