

INTEGRATION SOLUTIONS

$$1a) \int (3x^2 + 4x + 1) \cdot dx \\ = x^3 + 2x^2 + x + C$$

$$b) \int (e^x + \frac{2}{x}) \cdot dx \\ = e^x + 2 \ln x + C$$

$$c) \int (12x^3 - 2x) \cdot dx \\ = 4x^3 - x^2 + C$$

$$d) \int (-2e^x + 8x) \cdot dx \\ = -2e^x + 4x^2 + C$$

$$2. a) \int (6x^2 - 2x + 10) dx \\ = 2x^3 - x^2 + 10x + C$$

$$b) \int (e^x - \frac{1}{x}) dx \\ = e^x - \ln x + C$$

$$c) \int (3x^2 + 4x + 5) dx \\ = x^3 + 2x^2 + 5x + C$$

$$d) \int (2e^x + 3x + 5) \cdot dx \\ = 2e^x + \frac{3}{2}x^2 + 5x + C$$

$$3a) \int (9x^2 + x + 5) dx \\ = 3x^3 + \frac{1}{2}x^2 + 5x + C$$

$$b) \int (2e^x - \frac{3}{x}) dx \\ = 2e^x - 3 \ln x$$

$$c) \int (6x^2 - 6x + 6) dx \\ = 2x^3 - 3x^2 + 6x + C$$

$$d) \int (e^x + 4) dx \\ = e^x + 4x + C$$