

152/5.2

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$$a) \int (5x^6 - 2x^4 + 3x - 1) dx = \frac{5x^7}{7} - \frac{2x^5}{5} + \frac{3x^2}{2} - x + C$$

$$= \text{nebo } \underline{\underline{\frac{5}{7}x^7 - \frac{2}{5}x^5 + \frac{3}{2}x^2 - x + C}}$$

$$b) \int (2x-3)^2 dx = \int (4x^2 - 12x + 9) dx = \frac{4x^3}{3} - \frac{12x^2}{2} + \frac{9x}{1} + C$$

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

$$c) \int (x^2-1)(x+2)^2 dx = \int [(x^2-1)(x^2+4x+4)] dx =$$

$$= \int (x^4 + 4x^3 + 4x^2 - x^2 - 4x - 4) dx =$$

$$= \int (x^4 + 4x^3 + 3x^2 - 4x - 4) dx = \frac{x^5}{5} + \frac{4x^4}{4} + \frac{3x^3}{3} - \frac{4x^2}{2} - 4x + C =$$

$$= \underline{\underline{\frac{1}{5}x^5 + x^4 + x^3 - 2x^2 - 4x + C}}$$

$$d) \int (5a + 2x)^3 dx = \int (125a^3 + 3 \cdot 25a^2 \cdot 2x + 3 \cdot 5a \cdot 4x^2 + 8x^3) dx =$$

$$= 125a^3x + \frac{3 \cdot 25a^2 \cdot 2x^2}{2} + \frac{3 \cdot 5a \cdot 4x^3}{3} + \frac{8x^4}{4} + C =$$

$$= \underline{\underline{125a^3x + 75a^2x^2 + 20ax^3 + 2x^4 + C}}$$