

$$3) a) A + C = 5x^2 - 2x^2 = 3x^2$$

$$b) 2A + 3C = 2 \cdot 5x^2 + 3(-2x^2) = 10x^2 - 6x^2 = 4x^2$$

$$c) A^2 - C = (5x^2)^2 - (-2x^2) = 25x^4 + 2x^2$$

$$d) (A \cdot B) : C = \frac{5x^2 \cdot 4x}{-2x^2} = \frac{20x^3}{-2x^2} = -10x$$

$$e) \frac{A}{C} \cdot B = \frac{5x^2}{-2x^2} \cdot 4x = \frac{-5}{2} \cdot 4x = -10x$$

$$f) \frac{B^2}{C^2} = \frac{(4x)^2}{(-2x^2)^2} = \frac{16x^2}{4x^4} = 4 \cdot \frac{1}{x^2}$$

$$4) a) \frac{3}{2x} - \frac{2}{3x} = \frac{3 \cdot 3 - 2 \cdot 2}{6x} = \frac{5}{6x}$$

$$\begin{cases} 2x = 2 \cdot x \\ 3x = 3 \cdot x \end{cases} \text{ minimum} = 2 \cdot 3 \cdot x = 6x$$

$$b) \frac{1}{x} + \frac{1}{x^2} = \frac{x+1}{x^2}$$

$$c) \frac{2}{x^2} + \frac{1}{2x} = \frac{2 \cdot 2 + 1 \cdot x}{2x^2} = \frac{4+x}{2x^2}$$

$$d) \frac{1}{x} + \frac{2}{x^2} + \frac{3}{x^3} = \frac{x^2 + 2x + 3}{x^3}$$