

$$\frac{12a^3x^4 + 2a^2x^5}{18ab^2x + 3b^2x^2} = \frac{2a^2x^4(6a + x)}{3b^2x(6a + x)} = \frac{2a^2x^3}{3b^2}.$$

$$\frac{4 - 2x + x^2}{x + 2} - x - 2 = \frac{4 - 2x + x^2 - x^2 - 4x - 4}{x - 2} = -\frac{6x}{x + 2}.$$

$$\frac{1}{(a - b)(a - c)} + \frac{1}{(b - a)(b - c)} + \frac{1}{(c - a)(c - b)} =$$

$$= \frac{1}{(a - b)(a - c)} - \frac{1}{(b - a)(b - c)} + \frac{1}{(a - c)(b - c)} =$$

$$= \frac{b - c - a + c + a - b}{(a - b)(a - c)(b - c)} = 0.$$

(Klein Jenő, Budapest.)