Stack - tehtävä

1. a) $-2x^3 - 6x + x - 11x^2 + 3x = -13x^2 - 2x$

b) $-4xy^2 + x^2y - 6xy - 11y^2x - xy = xy(-4y + x - 6 - 11y - 1)$

$= xy(-15y + x - 7)$

$= -15xy^2 + x^2y - 7xy$

c) $-2H + 6h - H + 11h = -3H + 17h$

2) $2 \cdot (-3 + x) \cdot (-5 + x) = -6 + 2x \cdot (-5 + x) = 30 - 10x - 6x + 2x^2$

$= 30 - 11x + 2x^2$

3) $2x^3 - 6 \cdot (-5 + x^3) = 2x^3 + 30 - 6x^3 = -4x^3 + 30$

4) $4x + x \cdot (2y - (-9y + 3)) = 4x + x \cdot (2y + 9y - 3) = 4x + 2xy + 9xy - 3x$

$= x + 11xy$

5) $(2x + 9)^2 - (2x)^2 + 2 = (2x+9)(2x+9) - 4x^2 + 2 = 4x^2 + 18x + 18x + 81 - 4x^2 + 2$

$= 36x + 83$

6) $\frac{-6x^3y^2 + 9x^4y^5}{3xy} = \frac{-6x^3y^2}{3xy} + \frac{9x^4y^5}{3xy} = -2x^2y + 3x^3y^4$

7) $\left(b \cdot \left(\frac{a}{4} + \frac{a}{4}\right)\right) + \frac{a}{7}\left(a + \left(\frac{a}{4} + \frac{a}{4}\right)\right)$

$= \left(b \cdot \frac{2a}{4}\right) + \frac{a}{7}\left(a - \frac{2a}{4}\right)$

$= \frac{2ab}{4} + \frac{a^2}{7} - \frac{2a^2}{28}$ (4)

$= \frac{2ab}{4} + \frac{4a^2}{28} - \frac{2a^2}{28}$

$= \frac{2ab}{4} + \frac{2a^2}{28}$ (2)

$= \frac{ab}{2} + \frac{a^2}{14}$