

Schwierigkeitsgrad 1:

$$(1) \quad 3(3x + 2)^2 = 3(9x^2 + 12x + 4) \\ = \underline{27x^2 + 36x + 12}$$

$$(2) \quad (-4)(5x - 4) \\ = \underline{-20x + 16}$$

$$(3) \quad (x - 4)(5x + 4) = 5x^2 + 4x - 20x - 16 \\ = \underline{5x^2 - 16x - 16}$$

Schwierigkeitsgrad 2:

$$(4) \quad (3x + 2)^2(4x - 2) = (9x^2 + 12x + 4)(4x - 2) = 36x^3 - 18x^2 + 48x^2 - 24x + 16x - 8 \\ = \underline{36x^3 + 30x^2 - 8x - 8}$$

$$(5) \quad (x + y)^2 - 2xy = x^2 + 2xy + y^2 - 2xy \\ = \underline{x^2 + y^2}$$

$$(6) \quad -(x + 5a)^2 - 7ax = -(x^2 + 10ax + 25a^2) - 7ax = -x^2 - 10ax - 25a^2 - 7ax \\ = \underline{-x^2 - 17ax - 25a^2}$$

Schwierigkeitsgrad 3:

$$(7) \quad (3a + 4b - 5ab)(7a + 2b) - 6a^2b = (21a^2 + 6ab + 28ab + 8b^2 - 35a^2b - 10ab^2) - 6a^2b \\ = (21a^2 + 34ab + 8b^2 - 35a^2b - 10ab^2) - 6a^2b \\ = \underline{21a^2 + 34ab + 8b^2 - 41a^2b - 10ab^2}$$

$$(8) \quad (6 - 7b)^2 - (3 + 2b)^2 = (36 - 84b + 49b^2) - (9 + 12b + 4b^2) = 36 - 84b + 49b^2 - 9 - 12b - 4b^2 \\ = \underline{27 - 96b + 45b^2}$$

$$(9) \quad \left(\frac{1}{9}x^2 - 5y\right) - \left(\frac{1}{3}x + 3y\right)^2 = \frac{1}{9}x^2 - 5y - \left(\frac{1}{9}x^2 + 2xy + 9y^2\right) \\ = \frac{1}{9}x^2 - 5y - \frac{1}{9}x^2 - 2xy - 9y^2 \\ = \underline{-2xy - 5y - 9y^2}$$