S. 37 Nr. 2

1. Bifo:

$0{,}16x^2+0{,}8x+1 \quad (0{,}4x)^2+2\cdot 0{,}4x\cdot 1+1^2=(0{,}4x+1)^2$

$4x^2+8x+4 \quad =(2x)^2+2\cdot 2x\cdot 2+2^2=(2x+2)^2$

$(xy+y)^2 \quad =(xy)^2+2\cdot xy\cdot y+y^2=x^2y^2+2xy^2+y^2$

$(-x-9)^2 \quad =x^2+2\cdot x\cdot 9+9^2=x^2+18x+81$

2. Bifo:

$(5x-7)^2 \quad =(5x)^2-2\cdot 5x\cdot 7+7^2=25x^2-70x+49$

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

$\left(12-\frac{1}{3}x\right)^2 \quad =12^2-2\cdot 12\cdot\frac{1}{3}x+\left(\frac{1}{3}x\right)^2=144-8x+\frac{1}{9}x^2$

3. Bifo:

$4x^2-64 \quad =(2x)^2-8^2=(2x+8)(2x-8)$

$x^2y^8-1 \quad =(xy^4)^2-1^2=(xy^4+1)(xy^4-1)$

$\left(\frac{1}{2}x-2\right)\left(\frac{1}{2}x+2\right) \quad =\left(\frac{1}{2}x\right)^2-2^2=\frac{1}{4}x^2-4$

$(6-3x)(3x+6) \quad =(6-3x)(6+3x)=6^2-(3x)^2=36-9x^2$

$a^2-25 \quad =a^2-5^2=(a-5)(a+5)$

keine Bifo:

$$\begin{aligned}(7a-3)(3a-7) \quad &=7a\cdot 3a+7a\cdot(-7)-3\cdot 3a-3\cdot(-7)\\ &=7\cdot 3\cdot a\cdot a+7\cdot(-7)\cdot a-3\cdot 3\cdot a-3\cdot(-7)\\ &=21a^2-49a+21\end{aligned}$$

$$\begin{aligned}(-2{,}5y+1)(2{,}5y-x) \quad &=-2{,}5y\cdot 2{,}5y-2{,}5y\cdot(-x)+1\cdot 2{,}5y+1\cdot(-x)\\ &=-2{,}5\cdot 2{,}5\cdot y\cdot y-2{,}5\cdot(-1)\cdot x\cdot y+1\cdot 2{,}5\cdot y+1\cdot(-1)x\\ &=-6{,}25y^2+2{,}5xy+2{,}5y-x\end{aligned}$$