

Verbindungsaufgaben

$$\begin{aligned}5x \cdot 3y - 7x \cdot 2y &= \\&= \mathbf{15xy - 14xy} = \\&= \mathbf{xy}\end{aligned}$$

$$\begin{aligned}46a - 3 \cdot (12a + 3b) &= \\&= \mathbf{46a - 36a - 9b} = \\&= \mathbf{10a - 9b}\end{aligned}$$

$$\begin{aligned}10uv - (3u - 2v) \cdot (u + 4v) &= \\&= \mathbf{10 uv - (3u^2 + 12uv - 2uv - 8v^2)} = \\&= \mathbf{10 uv - (3u^2 + 10uv - 8v^2)} = \\&= \mathbf{10 uv - 3u^2 - 10uv + 8v^2} = \\&= \mathbf{- 3u^2 + 8v^2}\end{aligned}$$

$$\begin{aligned}2a \cdot (3a + b) + (a - b)^2 &= \\&= \mathbf{6a^2 + 2ab + (a^2 - 2ab + b^2)} = \\&= \mathbf{7a^2 + b^2}\end{aligned}$$

$$\begin{aligned}(x + 2)^2 - (x - 2)^2 &= \\&= \mathbf{x^2 + 4x + 4 - (x^2 - 4x + 4)} = \\&= \mathbf{x^2 + 4x + 4 - x^2 + 4x - 4} = \mathbf{8x}\end{aligned}$$

$$\begin{aligned}12x^2 - [(x + 2y)^2 - 4x \cdot (x + y)] + 4y^2 &= \\&= \mathbf{12x^2 - [x^2 + 4xy + 4y^2 - 4x^2 - 4xy]} + 4y^2 = \\&= \mathbf{12x^2 - [-3x^2 + 4y^2]} + 4y^2 = \\&= \mathbf{12x^2 + 3x^2 - 4y^2 + 4y^2} = \\&= \mathbf{15x^2}\end{aligned}$$

$$\begin{aligned}36x^2 : 3x - 4x \cdot 15 &= \\&= \mathbf{12x - 60x} = \\&= \mathbf{- 48x}\end{aligned}$$

$$\begin{aligned}6xy - (3x - 2y) \cdot 2y &= \\&= \mathbf{6xy - (6xy - 4y^2)} = \\&= \mathbf{6xy - 6xy + 4y^2} = \mathbf{4y^2}\end{aligned}$$

$$\begin{aligned}x^2 - (x + y) \cdot (x - y) &= \\&= \mathbf{x^2 - (x^2 - y^2)} = \\&= \mathbf{x^2 - x^2 + y^2} = \\&= \mathbf{y^2}\end{aligned}$$