

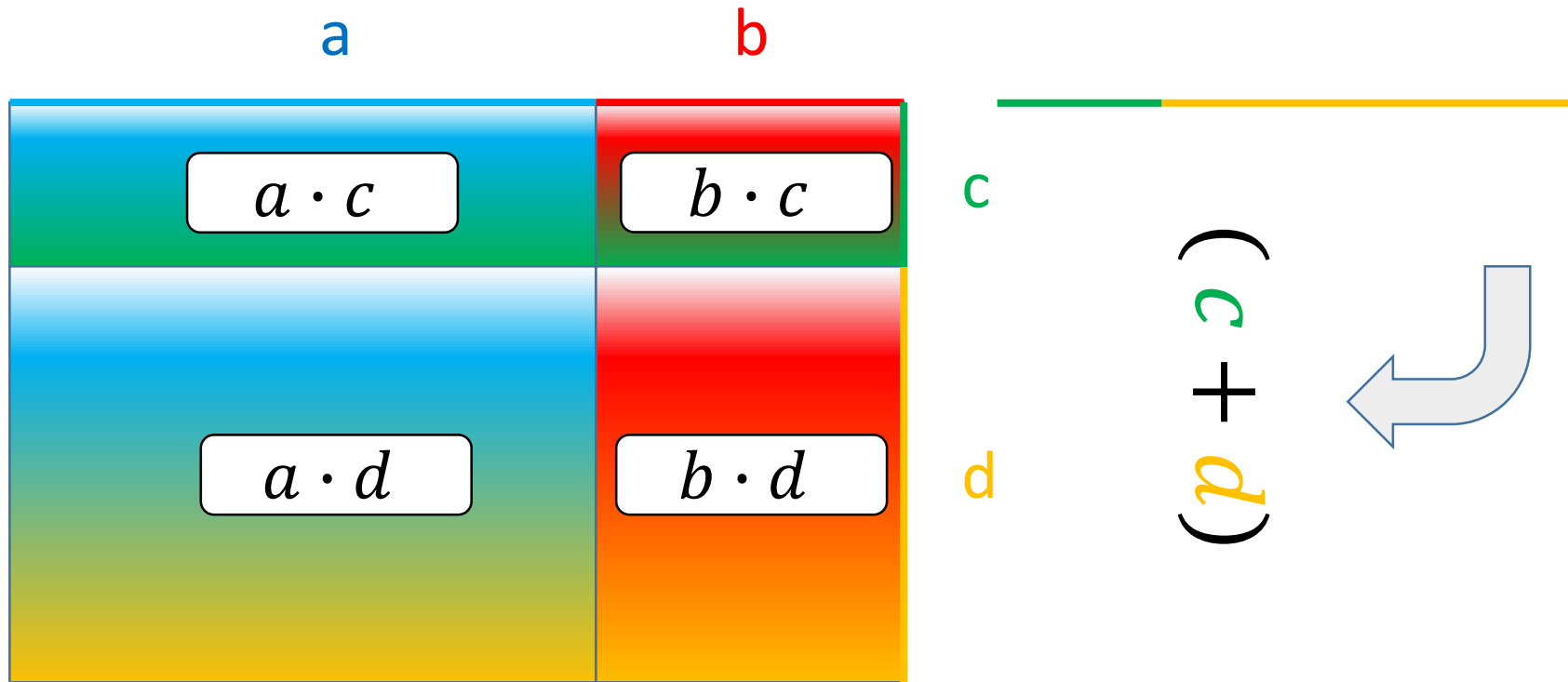
# Multiplikation von Summentermen

$$(a + b) \cdot (c + d)$$

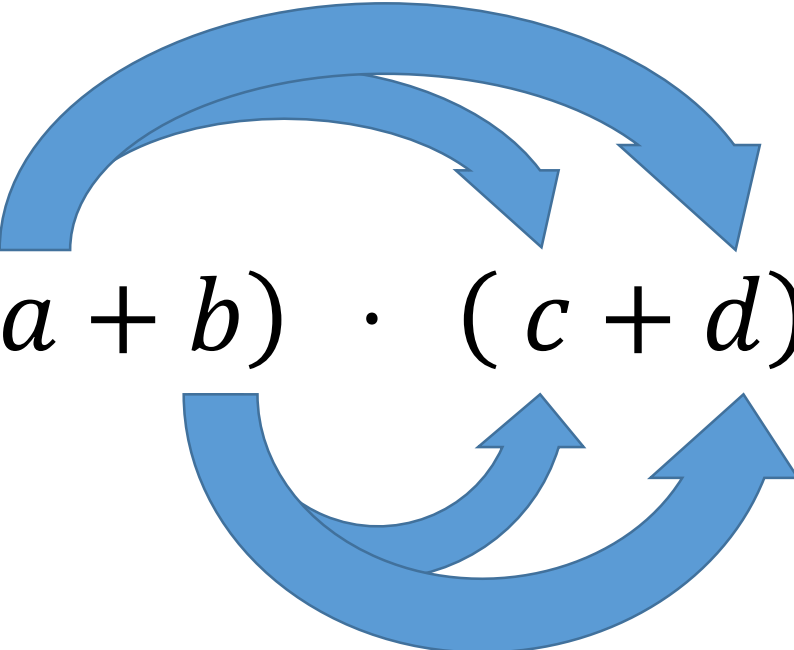
$$(a + b) \odot (c + d)$$

$$(a + b)$$

$$(c + d)$$

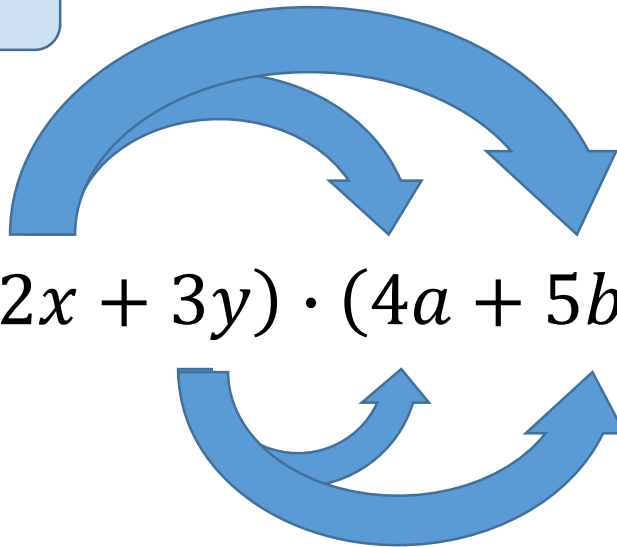


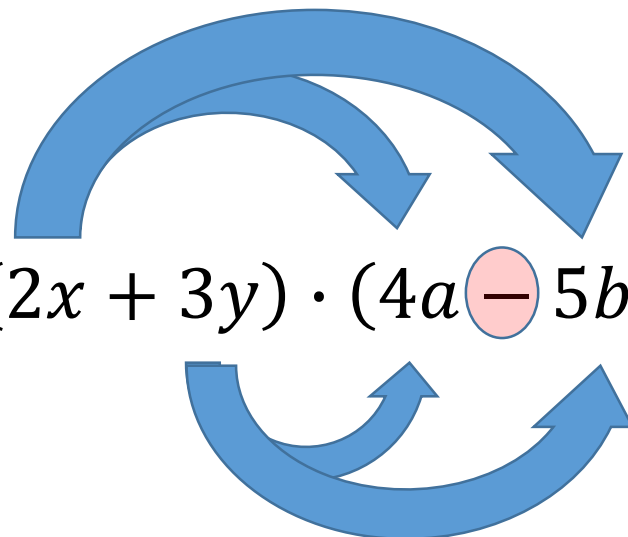
$$A = a \cdot c + a \cdot d + b \cdot c + b \cdot d$$

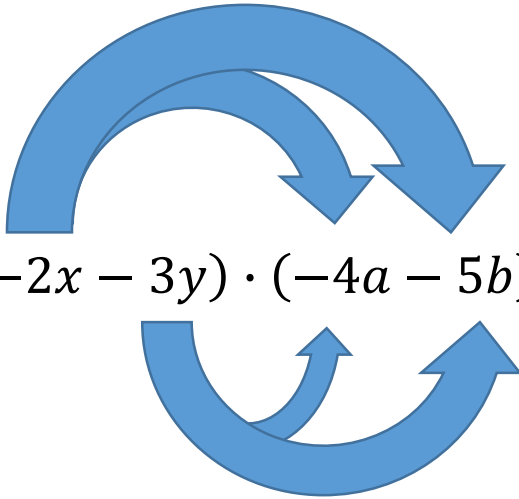

$$(a + b) \cdot (c + d) = a \cdot c + a \cdot d + b \cdot c + b \cdot d$$

Jeder Term einer Summe wird mit jedem anderen Term der anderen Summe multipliziert.

## Beispiele


$$\begin{aligned}(2x + 3y) \cdot (4a + 5b) &= 2x \cdot 4a + 2x \cdot 5b + 3y \cdot 4a + 3y \cdot 5b \\ &= 8ax + 10bx + 12ay + 15by\end{aligned}$$


$$\begin{aligned}(2x + 3y) \cdot (4a - 5b) &= 2x \cdot 4a + 2x \cdot (-5b) + 3y \cdot 4a + 3y \cdot (-5b) \\ &= 8ax - 10bx + 12ay - 15by\end{aligned}$$


$$\begin{aligned}(-2x - 3y) \cdot (-4a - 5b) &= (-2x) \cdot (-4a) + (-2x) \cdot (-5b) + (-3y) \cdot (-4a) + (-3y) \cdot (-5b) \\ &= 8ax + 10bx + 12ay + 15by\end{aligned}$$