

# Vigtige regneregler

# Regneregler

- Parentesregler
  - Plus- og minusparenteser
  - Gange en parentes med et tal
    - distributive lov
  - Gange to parenteser
  - Kvadratsætningerne MFS (7)-(9)
  - Sætte uden for parentes
    - faktorisere
- Potensregel MFS(10)

*Matematikkens  
formelsamling*

**CAS**  
Computer Algebraic Systems

$$-(-x + y) = x - y$$

$$-(x^2 - x + 2y) = -x^2 + x - 2y$$

$$(-x + y) = -x + y$$

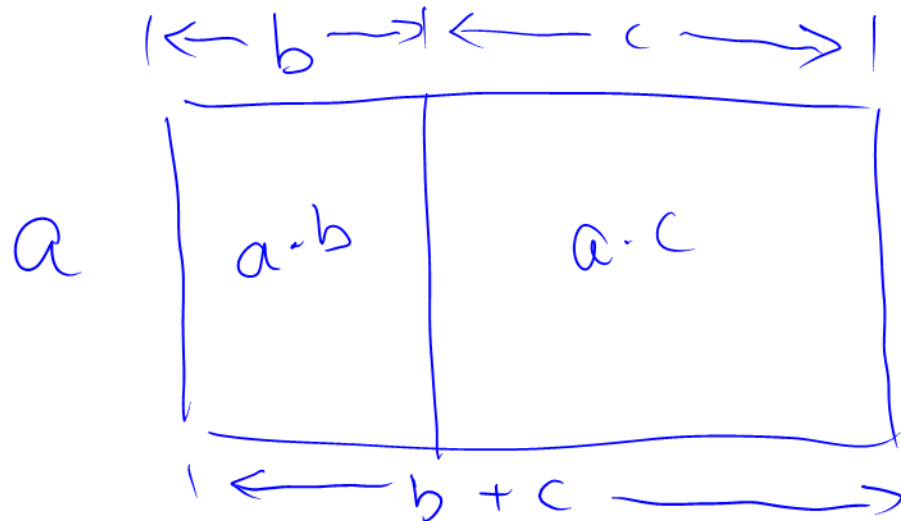
$$2 \cdot (5+3) = 2 \cdot 8 = 16$$

$$2 \cdot (a+b) = 2a + 2b$$

$$\begin{aligned} x \cdot (b - 2c + d) &= x \cdot b - x \cdot 2c + x \cdot d \\ &= x \cdot b - 2 \cdot x \cdot c + x \cdot d \end{aligned}$$

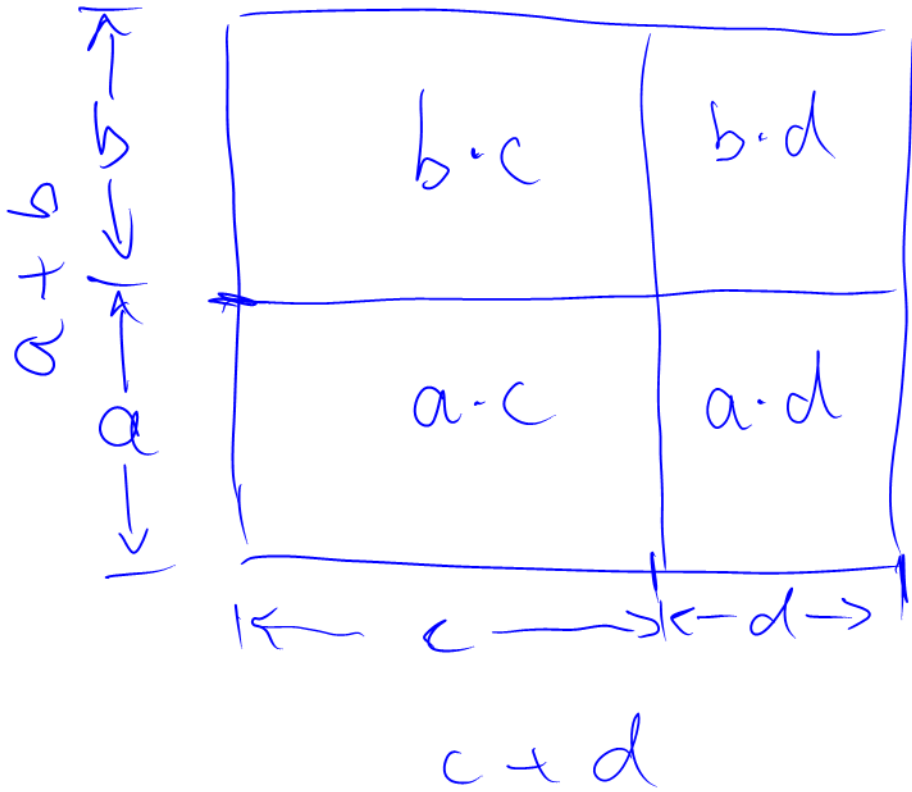
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$$a \cdot (b+c) = a \cdot b + a \cdot c$$



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

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

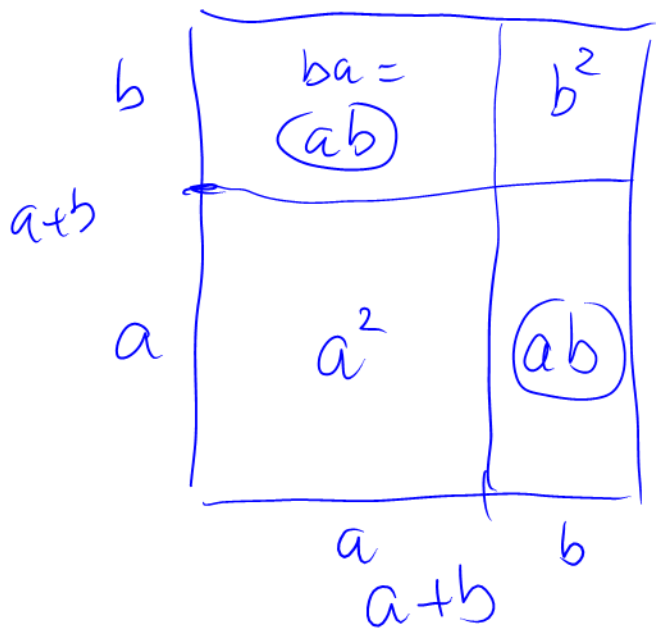


$$\underline{\underline{(x-y)}} \underline{\underline{(y-z)}} = xy - xz - y^2 + yz$$

$$(a+b) \cdot (a+b) = (a+b)^2 = a^2 + b^2 + 2ab \quad (7)$$

$$(a-b)(a-b) = (a-b)^2 = a^2 + b^2 - 2ab \quad (8)$$

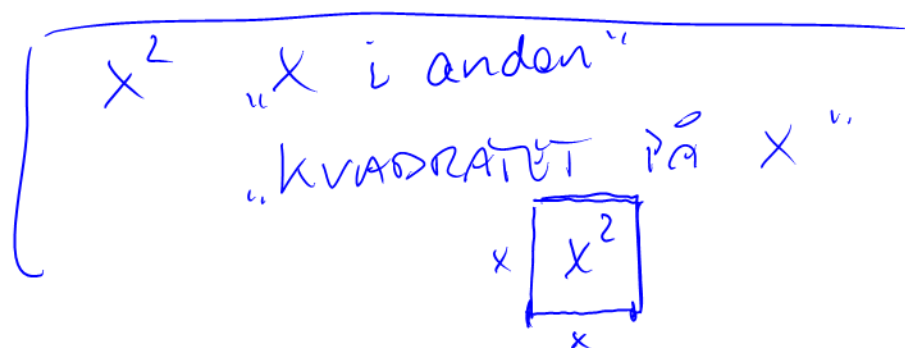
$$\underbrace{(a+b)}_{\text{sum}} \underbrace{(a-b)}_{\text{DIFFERENS}} = aa - ab + ba - bb = a^2 - b^2 \quad (9)$$



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$$(a-b)(a-b) = a^2 - \overbrace{ab}^{ab} - \overbrace{ba}^{ab} + b^2$$

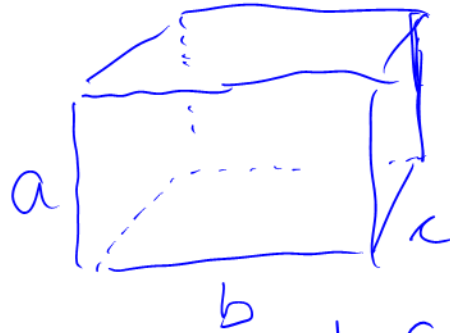
$$= a^2 + b^2 - 2ab$$



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

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



$$b \cdot c = \text{gulvareal}$$

$$\begin{aligned} \text{Rumfang} &= \text{højde} \times \text{gulv} \\ &= a \cdot (b \cdot c) \end{aligned}$$

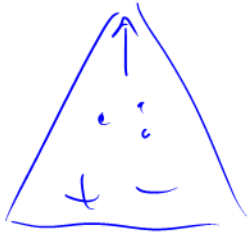


$$a^2 \cdot a^3 = \underbrace{a \cdot a}_{2} \cdot \underbrace{a \cdot a \cdot a}_{3} = a^{2+3} = a^5$$

$$10^p \cdot 10^q = 10^{p+q}$$


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$$\underline{a^2 + a^3} = \underline{a \cdot a} + \underline{a \cdot a \cdot a} = a \cdot (a + a \cdot a)$$



$$= a \cdot (\underline{a \cdot 1} + \underline{a \cdot a})$$

$$= a \cdot \underline{a \cdot (1 + a)}$$

$$= a^2(1 + a)$$