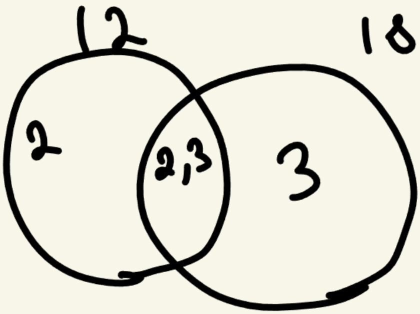
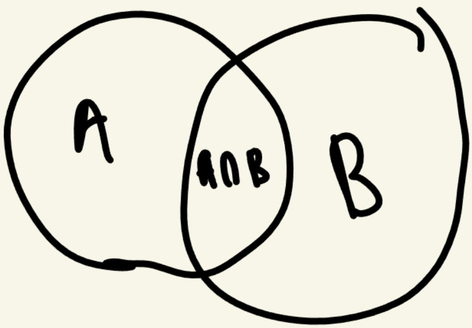
office hours
Erie 3125

January 5, 2026



$$\frac{ab}{\gcd(a,b)} = \operatorname{lcm}(a,b)$$



$$P(A \cup B) = P(A) + P(B) - P(A \cap B)$$

For all $x \in \mathbb{R}$, $x \cdot 0 = 0$

and $0 \cdot x = 0$

proof: Let $x \in \mathbb{R}$

$x+0=x$

$1+0=\underline{1}$ by identity

$0+0=0$

$x(1+0)=x\cdot 1$

$x(1+0)=x$ by identity

$x\cdot 1+x\cdot 0=x$ by distributivity

$x+x\cdot 0=x$ by identity

$-x+(x+x\cdot 0)=-x+x$

$-x+x+x\cdot 0=-x+x$ Assosiativ.

$0+x\cdot 0=0$ invertibility

$x\cdot 0=0$ identity

Also, $0\cdot x=0$ for all

$x \in \mathbb{R}$, $x \cdot 0 = 0$ and $0 \cdot x = 0$