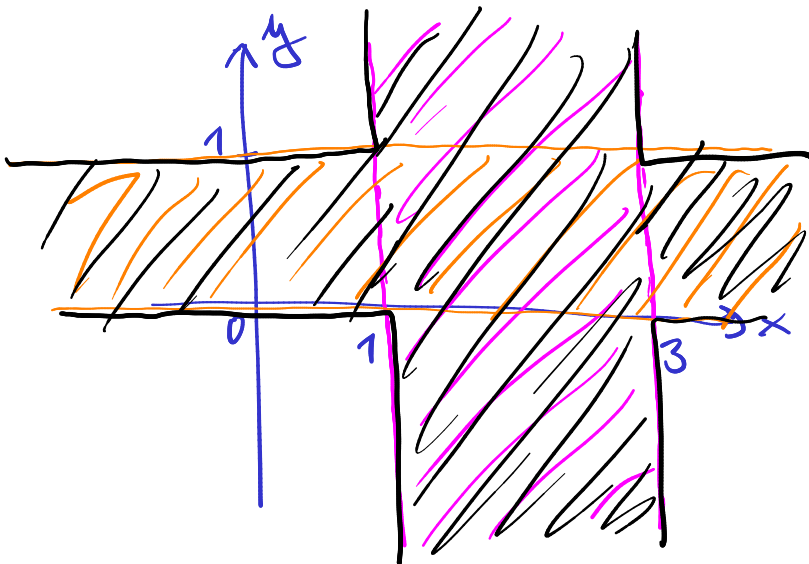


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Kreuz:

$$M := \{ (x, y) \in \mathbb{R}^2 : \underbrace{x \in [1, 3]}_{\text{Aussage 1}} \text{ oder } \underbrace{y \in [0, 1]}_{\text{Aussage 2}} \}$$

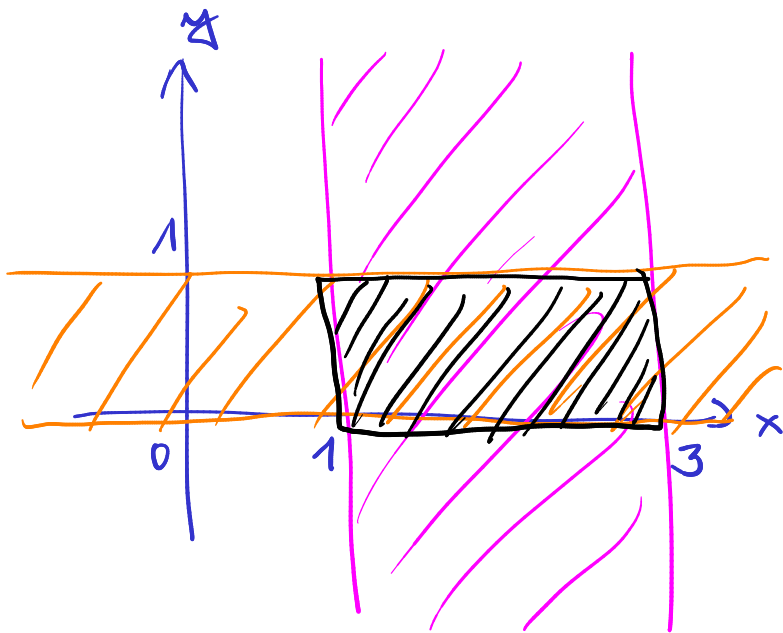
$$= \{ (x, y) \in \mathbb{R}^2 : x \in [1, 3] \} \cup \{ (x, y) \in \mathbb{R}^2 : y \in [0, 1] \}$$



Rechteck:

$$M := \{ (x, y) \in \mathbb{R}^2 : \underbrace{x \in [1, 3]}_{\text{Aussage 1}} \text{ und } \underbrace{y \in [0, 1]}_{\text{Aussage 2}} \}$$

$$= \{ (x, y) \in \mathbb{R}^2 : x \in [1, 3] \} \cap \{ (x, y) \in \mathbb{R}^2 : y \in [0, 1] \}$$



Kreisring:

$$M := \{ (x, y) \in \mathbb{R}^2 : 1 \leq x^2 + y^2 \leq 4 \}$$

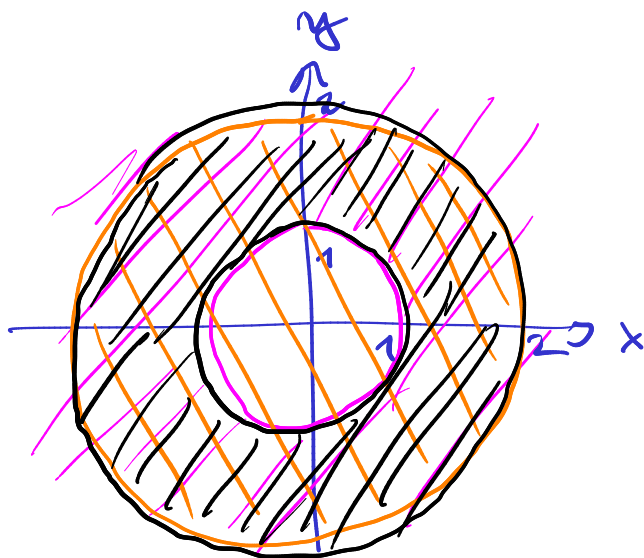
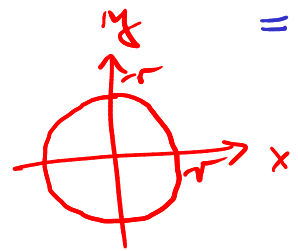
$$= \{ (x, y) \in \mathbb{R}^2 : 1 \leq x^2 + y^2 \text{ und } x^2 + y^2 \leq 4 \}$$

$$= \{ (x, y) : 1 \leq x^2 + y^2 \} \cap \{ (x, y) : x^2 + y^2 \leq 4 \}$$

$\underbrace{\quad}_{=2^2}$

Kreisgleichung:

$$x^2 + y^2 = r^2$$



$$1 \leq x^2 + y^2$$

$$\Leftrightarrow 1 \leq \sqrt{x^2 + y^2}$$

$$x^2 + y^2 \leq 4$$

$$\Leftrightarrow \sqrt{x^2 + y^2} \leq 2$$