$\underline{k\text{-tý řád}}$: $f(0), f(1), f(2), \ldots$

$$f(n+k) = F(n, f(n), \ldots, f(n+k-1))$$

př. $f(n+2) = f(n) + f(n+1)$

$c = (1-a-b)g$

$\lambda_{1,2} = \lambda$ $\quad \lambda^n, \; n\lambda^n$ $\quad g = \dfrac{c}{1-a-b}$

$$\boxed{f(n+2) = a f(n+1) + b f(n)} + c$$

f .. řeš. homogenní

g .. řeš. nehomogenní

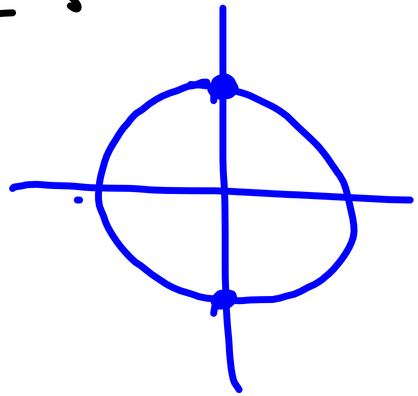
$g = g(n) \Rightarrow$

$f(n+2) + g(n+2) = \ldots$

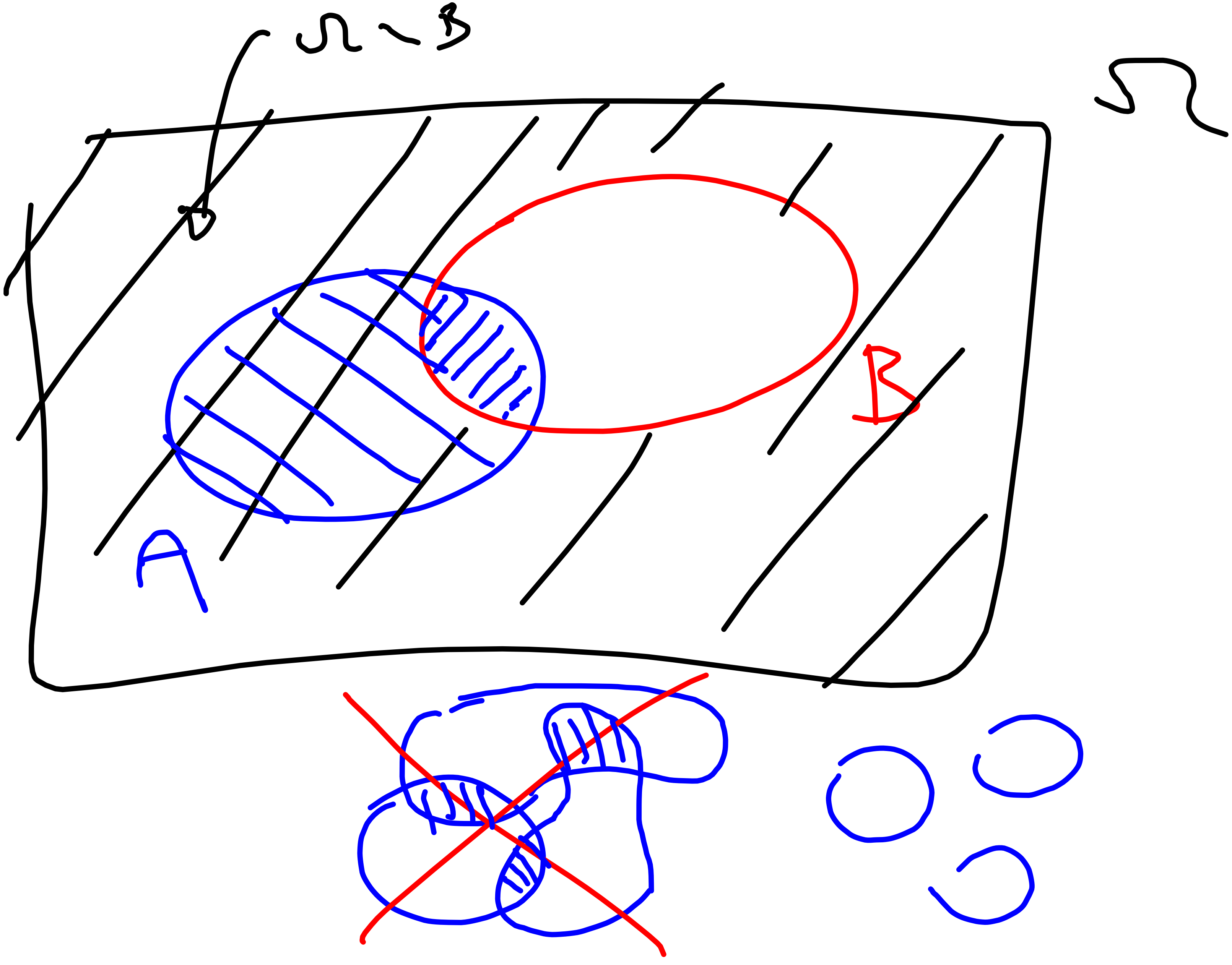
$g = ag + bg + c$

$$f(n+2) = -f(n)$$

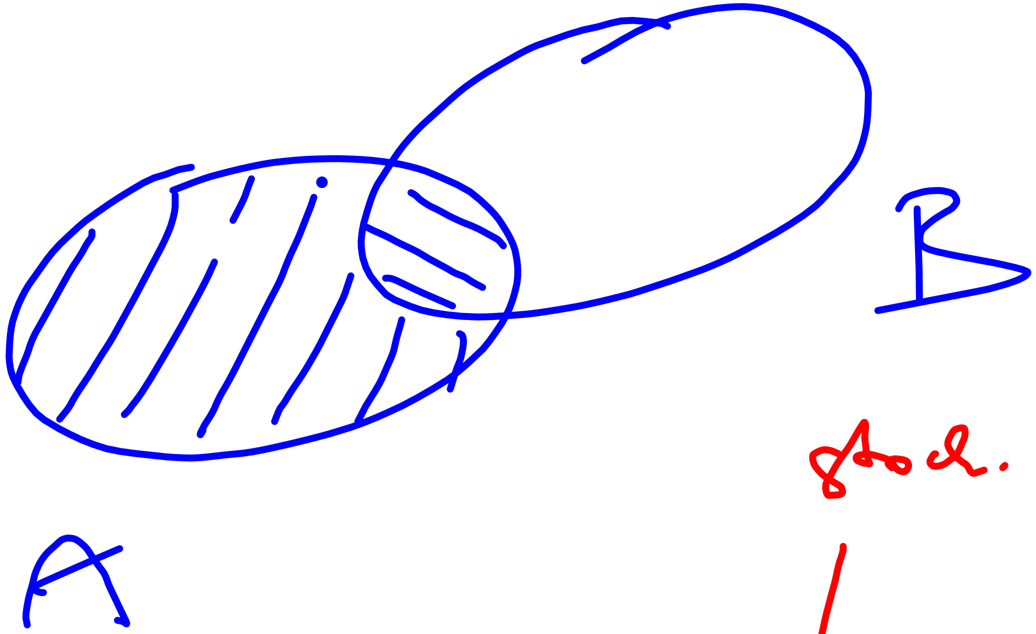
$$\alpha^2 + 1 = 0 \quad \Rightarrow \quad \alpha = \pm i$$



$$i^n, \quad -i^n$$


Ω \ B
Ω
B
A

$$A = (A \setminus B) \cup (A \cap B)$$



stoch. nezáv.

$$\Rightarrow \quad P(A) = P(A \setminus B) + \underbrace{P(A \cap B)}_{= P(A)\cdot P(B)}$$

$x \in A_1 \cup \dots \cup A_k \Leftrightarrow \exists i: x \in A_i$

$\Leftrightarrow \exists i: x \notin A_i^c \Leftrightarrow x \notin A_1^c \cap \dots \cap A_k^c$

$\Leftrightarrow x \in (A_1^c \cap \dots \cap A_k^c)^c$

aspoň jedna šestka 6 ve dvou hodech:

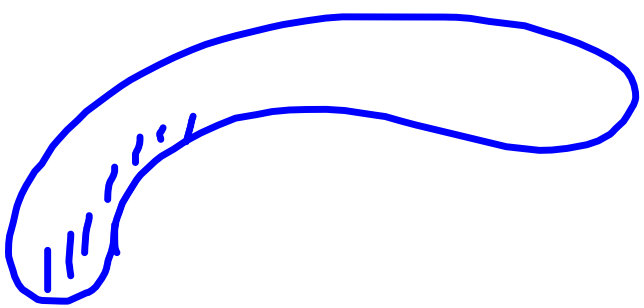
A_1 .. 6 první $\quad 1/6$

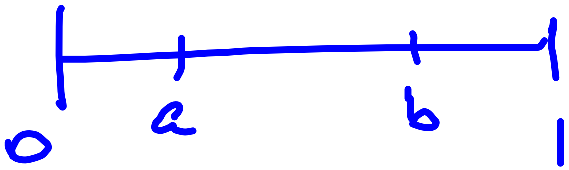
A_2 .. 6 potřetí $\quad 1/6$

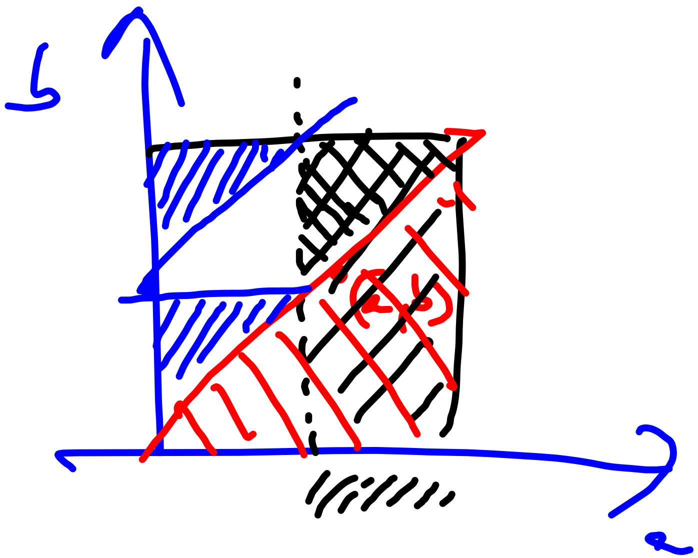
$$1 - (1 - 1/6)(1 - 1/6) = 1 - \frac{25}{36} = \frac{11}{36}$$

$$P(A_t \mid \underbrace{A_1 \cap \dots \cap A_{t-1}}_{=H}) = \frac{P(A_1 \cap \dots \cap A_t)}{P(A_1 \cap \dots \cap A_{t-1})}$$

$$\cancel{P(A_1)} \cdot \frac{\cancel{P(A_1 \cap A_2)}}{\cancel{P(A_1)}} \cdot \frac{\cancel{P(A_1 \cap A_2 \cap A_3)}}{\cancel{P(A_1 \cap A_2)}} \cdots \frac{P(A_1 \cap \dots \cap A_t)}{\cancel{P(A_1 \cap \dots A_{t-1})}}$$





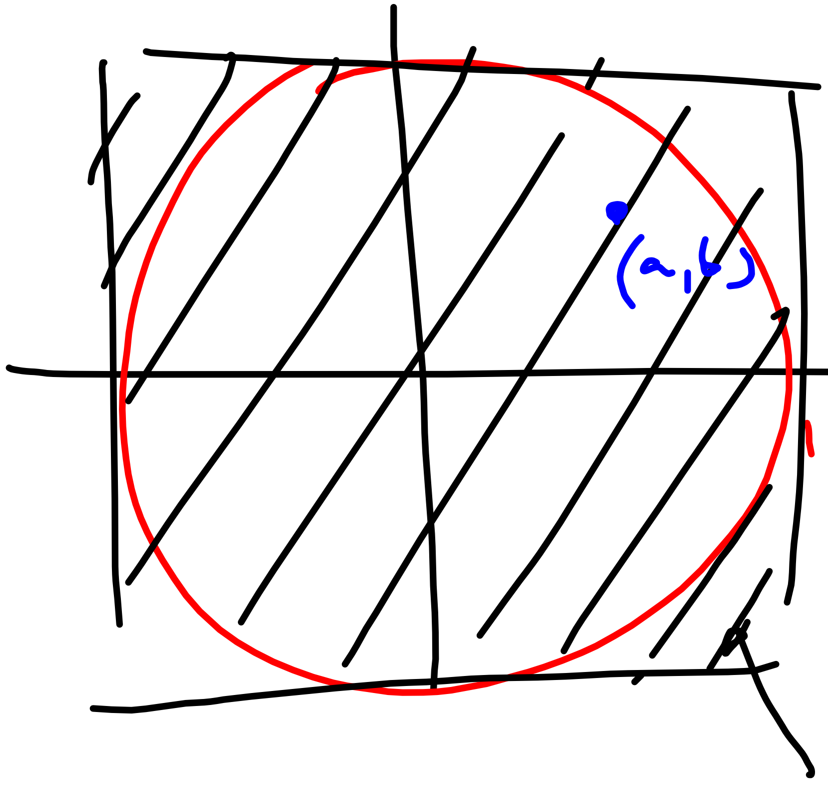


celá plocha 1

trojúhelníky 1/8

$\Rightarrow$ 3/8

πr^2



$a^2 + b^2 \leq 1$?

$\frac{1}{4}\pi$

Plocha 4