ODE

$a_1 y' + a_0 y = 0$ $\boxed{e^{\lambda t}}$

$y' = f(t,y)$ $y(t)$ 1. řád

$y(t_0) = y_0$, f spojitě dif. $\Rightarrow \exists!$ řeš.

konstanty

$a_k y^{(k)} + a_{k-1} y^{(k-1)} + \dots + a_0 y = b$

$a_k \neq 0$

k-tého řádu

1) homogenní případ $b = 0$ 2) $b \neq 0$

$y(t_0) = y_0,\ y'(t_0) = y_1,\ \dots,\ y^{(k-1)}(t_0) = y_{k-1}$

$a_k \lambda^k e^{\lambda t} + a_{k-1} \lambda^{k-1} e^{\lambda t} + \dots + a_0 e^{\lambda t} = 0$

$\Rightarrow (a_k \lambda^k + a_{k-1} \lambda^{k-1} + \dots + a_0) = 0$

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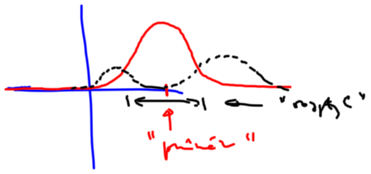

$e^{\frac{1}{n}(x_1 + \dots + x_n)} = \sqrt[n]{e^{x_1} e^{x_2} \cdots e^{x_n}}$

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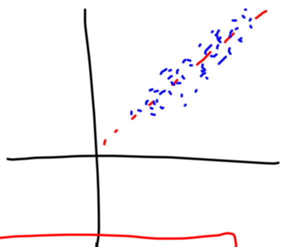

$\boxed{s_x = \frac{1}{n} \sum_{i=1}^{n} (x_i - \bar{x})^2}$ $s_y = \frac{1}{n} \sum_{i=1}^{n} (y_i - \bar{y})^2$

$cov(x,y) = \frac{1}{n} \sum (x_i - \bar{x})(y_i - \bar{y})$

$\frac{|cov(x,y)|}{\sqrt{s_x s_y}}$ ← korelační koeficient

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$S = \sum_{i=1}^{m} \frac{n_i}{n} (a_i - \bar{x})^2$

p_i

$H_X = \sum p_i F(p_i)$

dané požadavkem aditivity:

$\boxed{\text{pro } Z = X \times Y \quad H_Z = H_X + H_Y}$

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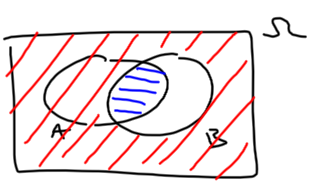

$\mathcal{A} = \{\Omega, \emptyset\}$

$P(\Omega) = 1$

$P(\emptyset) = 0$

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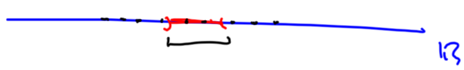
$\boxed{x = (x_1, x_2, \dots, x_{251})}$

$X = (X_1, \dots, X_{15})$

náhodné veličiny

hustota pravděpodobnosti, to je funkce



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