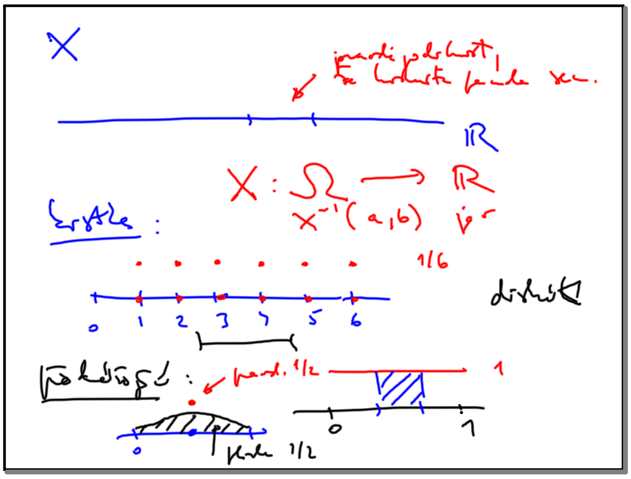
$$P(A|B) = \frac{\boxed{P(A\cap B)}}{P(B)}$$

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

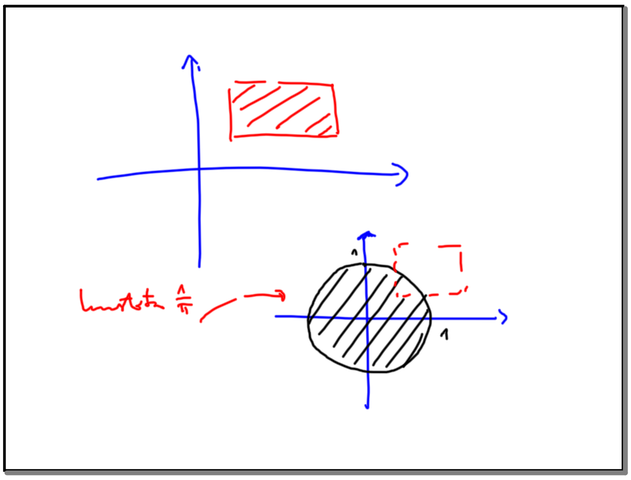
$1/3$ $\boxed{A}$ $1/2$ $\boxed{A'}$

$$P(A|B) = \frac{P(A)\,P(B|A)}{P(A)\,P(B|A) + P(A')\,P(B|A')} = \frac{1/2\cdot 1/3}{1/6 + 1/2\cdot 1/2} = \frac{1/6}{1/6+1/4} = \frac{2/12}{5/12} = 2/5$$

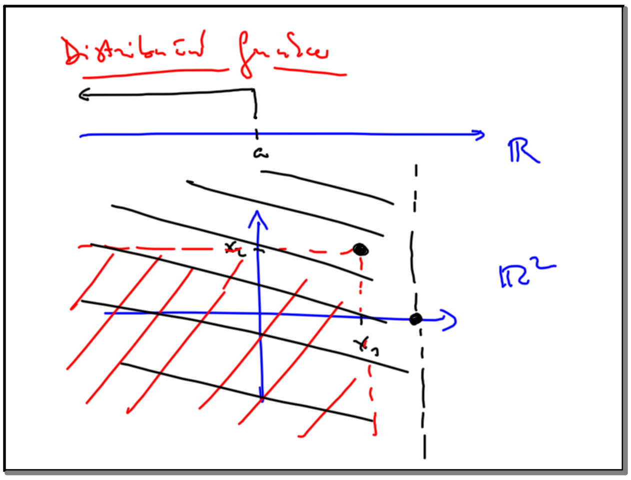
lis 13-14:05



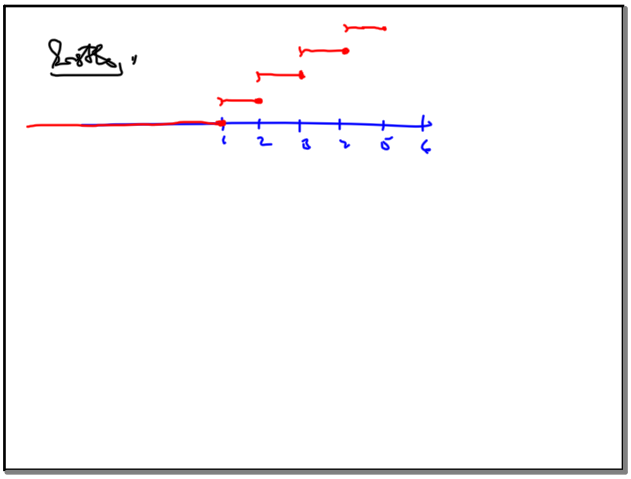
lis 13-14:29



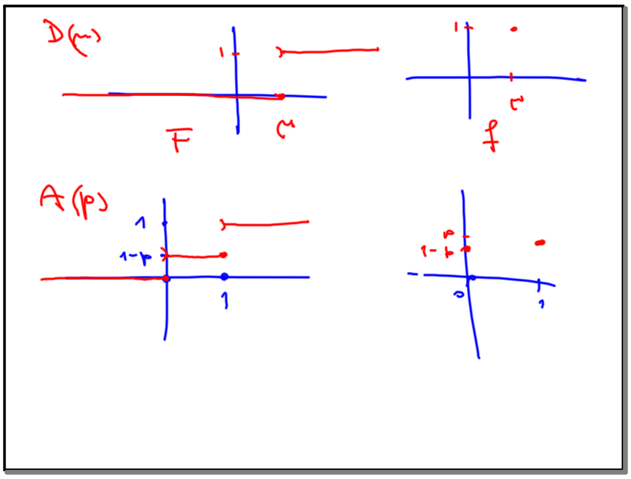
lis 13-14:42



lis 13-14:45



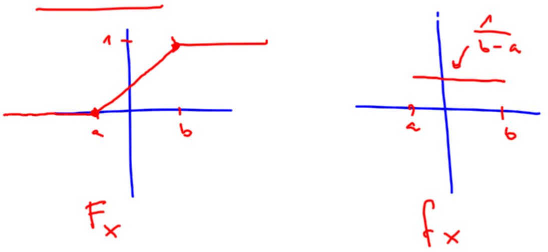
lis 13-14:51



lis 13-14:57

$$\boxed{\sum_{k=0}^{\infty} \frac{\lambda^k}{k!}} e^{-\lambda} = e^{-\lambda} e^{\lambda} = e^{0} = 1$$

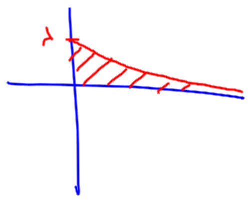
rovnoměrné:



lis 13-15:12

$$F_X(t) = \int_{-\infty}^{t} f(s)\,ds$$

[illegible] [illegible]



lis 13-15:28

$$e^{-x^2/2}$$

$$\left(\int_{-\infty}^{\infty} e^{-x^2/2}\,dx\right)^2 = \left(\int_{-\infty}^{\infty} e^{-x^2/2}\,dx\right)\cdot\left(\int_{-\infty}^{\infty} e^{-y^2/2}\,dy\right)$$

$$= \int_{-\infty}^{\infty}\int_{-\infty}^{\infty} e^{-(x^2+y^2)/2}\,dx\,dy = \int_{0}^{2\pi}\int_{0}^{\infty} e^{-r^2/2}\, r\,dr\,d\varphi$$

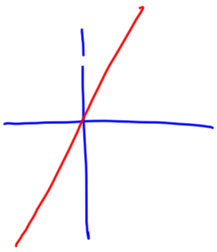
$$= 2\pi \int_{0}^{\infty} e^{-t}\,dt = \boxed{2\pi}$$

$\frac{1}{2}r^2 = t$

$\cancel{2}r\,dr = t$

lis 13-15:30

$(X, 2X)$ (X, X^2)



$X = (X_1, \dots, X_k)$

X_i nezávislé

$\Updownarrow$

$F_X(x_1, \dots, x_k) = F_{X_1}(x_1) \cdots F_{X_k}(x_k)$

$\Updownarrow$

$f_X(x_1, \dots, x_k) = f_{X_1}(x_1) \cdots f_{X_k}(x_k)$

lis 13-15:39