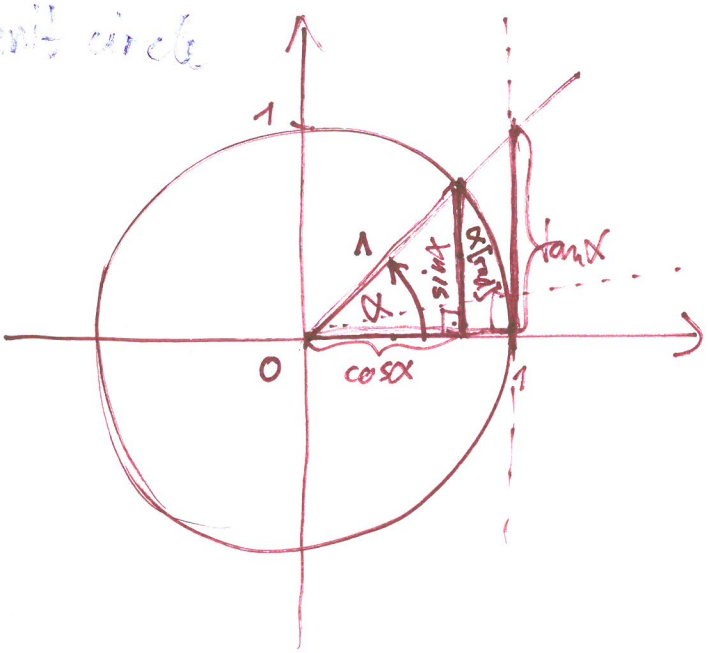
$3 \times 10^8 \frac{m}{s}$ angle: $\frac{\text{arc}}{\text{radius}}$ $\frac{m}{m} = 1$ rad

3(x 10^ 8

whole rev.: $\frac{2\pi r}{r} = 2\pi \equiv 360°$



$\frac{\sin\alpha}{\cos\alpha} = \tan\alpha$

for small angles:
$\sin x \approx \alpha[\text{rad}] \approx \tan x$

$a^x \cdot a^y = a^{x+y}$ $(a^x)^y = a^{x \cdot y}$ $\frac{1}{a^x} = a^{-x}$

~~Parameters~~ of exp. function:

$y = y_0 \cdot e^{-px}$

if $x = 0$ then: $y = y_0$

$y =$

if $x = \frac{1}{p}$ then $y = y_0 \cdot e^{-1}$

$= \frac{y_0}{e}$

$y = y_0 \cdot e^{-px}$

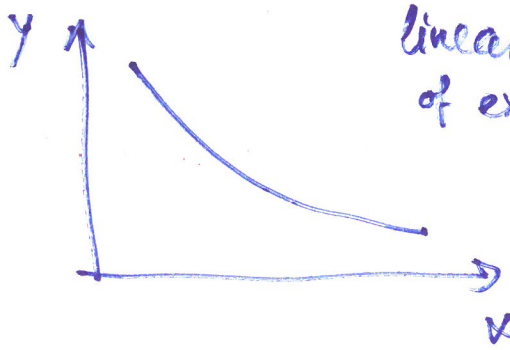
$\frac{y}{y_0} = e^{-px}$

$\ln\left(\frac{y}{y_0}\right) = \ln\left(e^{-px}\right) \quad -px \cdot \ln(e) = -px$

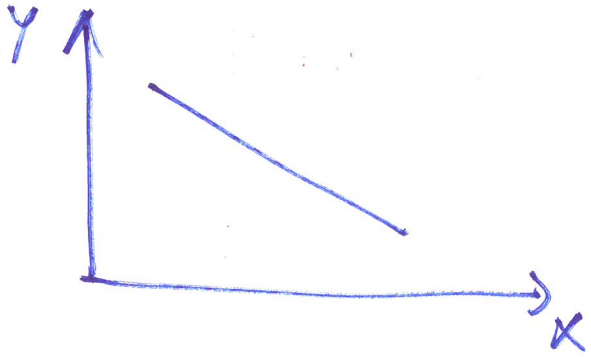
$\frac{\ln\left(\frac{y}{y_0}\right)}{-p} = x$

$\log(a^x) = x \cdot \log(a$

$\log_a(a) = 1$



linearization of exp. function



$$\log(y) = \log(y_0 \cdot e^{-px})$$

$$\log(y) = \log(y_0) + \log(e^{-px})$$

$$\log(y) = \log(y_0) - px \cdot \log(e)$$

$$\underbrace{\log(y)}_{} = \underbrace{-p \cdot \log(e)}_{} \cdot x + \underbrace{\log(y_0)}_{}$$

$$y = a \cdot x + b$$

$$\log(a \cdot b) = \log a + \log b$$

$$\log(a^x) = x \cdot \log(a)$$