Procent

Slutkapital $K = K_0 \cdot (1+r)^n$

Startkapital $K_0 = \dfrac{K}{(1+r)^n}$

Gennemsnitlig rente $r = \sqrt[n]{\dfrac{K}{K_0}} - 1$

Antal terminer $n = \dfrac{\log\left(\dfrac{K}{K_0}\right)}{\log(1+r)}$

Fremskrivningsfaktor $F = 1 + r$

Lang rente (R) og kort rente (r) $1 + R = (1+r)^n$

Gennemsnitlig rente, r:

$$(1+r)^n = (1+r_1)\cdot(1+r_2)\cdot\ldots\cdot(1+r_n)$$

Omregning mellem indekstal og priser

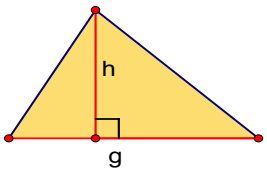
Priser	P_1	P_2
indekstal	i_1	i_2

$p_2 = \dfrac{p_1 \cdot i_2}{i_1}$ $i_2 = \dfrac{i_1 \cdot p_2}{p_1}$

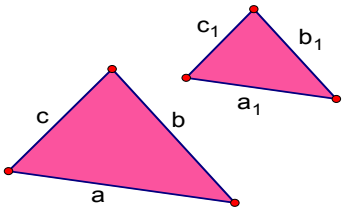
Geometri

Vinkelsum $A + B + C = 180°$

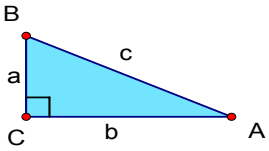
Trekantsareal $T = \frac{1}{2} \cdot h \cdot g$



Ensvinklede trekanter $\dfrac{a}{a_1} = \dfrac{b}{b_1} = \dfrac{c}{c_1}$



Retvinklet trekant, $\angle C = 90°$



$$a^2 + b^2 = c^2$$

$\sin(A) = \dfrac{a}{c}$ $\sin(B) = \dfrac{b}{c}$

$\cos(A) = \dfrac{b}{c}$ $\cos(B) = \dfrac{a}{c}$

$\tan(A) = \dfrac{a}{b}$ $\tan(B) = \dfrac{b}{a}$

Lineær funktion

$y = a \cdot x + b$

$x = \dfrac{y-b}{a}$

$a = \dfrac{y_2 - y_1}{x_2 - x_1} = \dfrac{\Delta y}{\Delta x}$

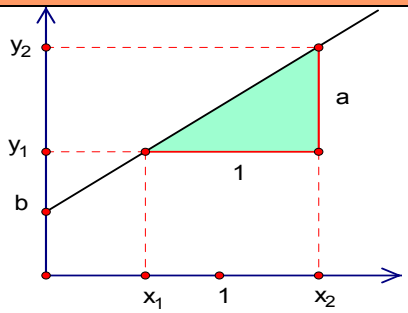
$b = y_1 - a \cdot x_1$

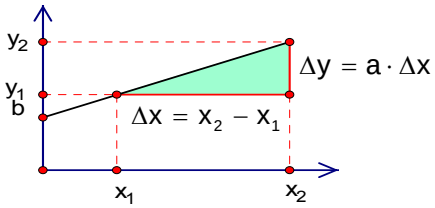
Proportionalitet:

$y = a \cdot x$

$a = \dfrac{y}{x}$

$x = \dfrac{y}{a}$





$\Delta x = x_2 - x_1$	
x_1	$x_2 = x_1 + \Delta x$
y_1	$y_2 = y_1 + \Delta y$
$\Delta y = a \cdot \Delta x = y_2 - y_1$	

hvor Δ betegner tilvækst (eller plusspring)

Eksponentiel funktion

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

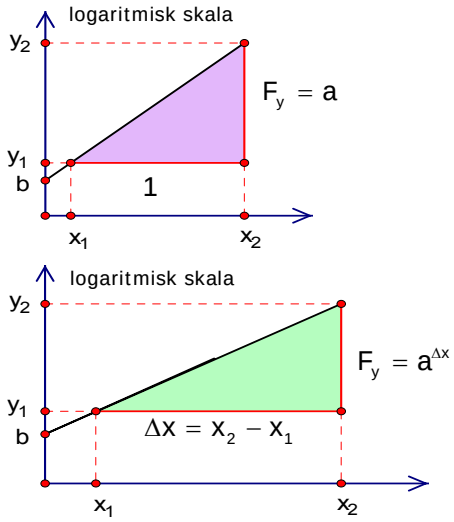
$$x = \frac{\log\left(\frac{y}{b}\right)}{\log(a)}$$

$$a = \sqrt[x_2 - x_1]{\frac{y_2}{y_1}} = \sqrt[\Delta x]{F_y} = 1 + r_1$$

$$b = \frac{y_1}{a^{x_1}}$$

$$T_2 = \frac{\log(2)}{\log(a)} \qquad a^{T_2} = 2$$

$$T_{½} = \frac{\log(0,5)}{\log(a)} \qquad a^{T_{½}} = \frac{1}{2}$$



$\Delta x = x_2 - x_1$	
x_1	$x_2 = x_1 + \Delta x$
y_1	$y_2 = y_1 \cdot F_y$
$F_y = a^{\Delta x} = \frac{y_2}{y_1} = 1 + r_y$	

hvor Δ betegner tilvækst (eller plusspring) mens F betegner fremskrivningsfaktor (eller gangespring)

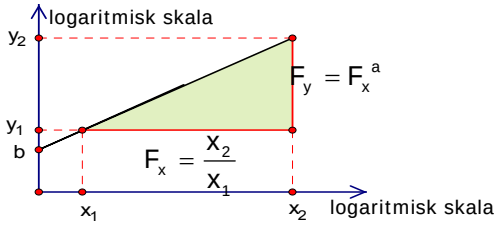
Potensfunktion

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

$$x = \sqrt[a]{\frac{y}{b}}$$

$$a = \frac{\log(y_2) - \log(y_1)}{\log(x_2) - \log(x_1)}$$

$$b = \frac{y_1}{x_1^{\,a}}$$



$F_x = \frac{x_2}{x_1} = 1 + r_x$	
x_1	$x_2 = x_1 \cdot F_x$
y_1	$y_2 = y_1 \cdot F_y$
$F_y = F_x^{\,a} = \frac{y_2}{y_1} = 1 + r_y$	

hvor F betegner fremskrivningsfaktor (eller gangespring)

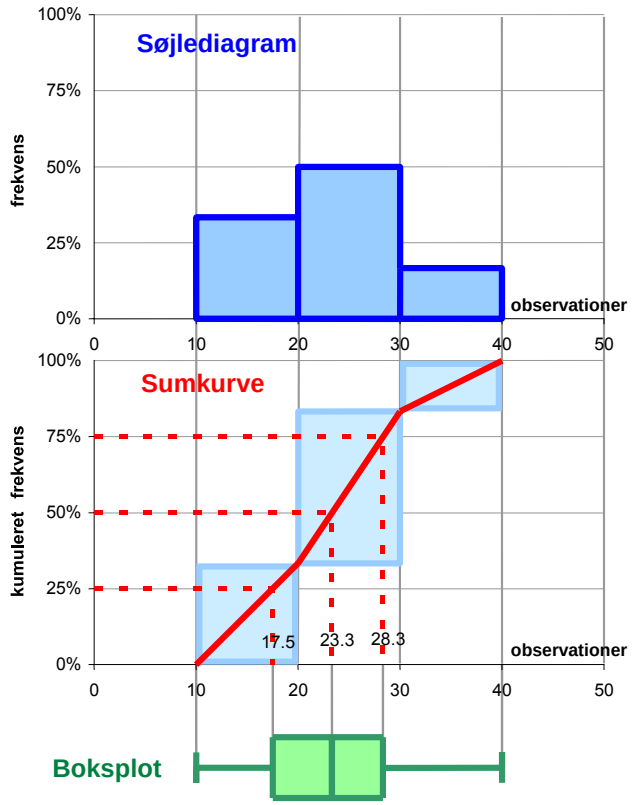
Omvendt proportionalitet:

$$y = b \cdot x^{-1} = b \cdot \frac{1}{x}$$

$$b = x \cdot y$$

$$x = \frac{b}{y}$$

Statistik



obs	hyp	kum.hyp	frek	kum.frek	middel
$x_1 \rightarrow x_2$	h_1	$H_1 = h_1$	$f_1 = \frac{h_1}{\Sigma h}$	$F_1 = f_1$	$m_1 = \frac{x_1 + x_2}{2} \cdot f_1$
$x_2 \rightarrow x_3$	h_2	$H_2 = H_1 + h_2$	$f_2 = \frac{h_2}{\Sigma h}$	$F_2 = F_1 + f_2$	$m_2 = \frac{x_2 + x_3}{2} \cdot f_2$
⋮	⋮	⋮	⋮	⋮	⋮
$x_n \rightarrow x_{n+1}$	h_n	$H_n = H_{n-1} + h_n$	$f_n = \frac{h_n}{\Sigma h}$	$F_n = F_{n-1} + f_n$	$m_n = \frac{x_n + x_{n+1}}{2} \cdot f_n$
I alt	$\sum h$		$\sum f = 1$		$\sum m$=middel