

A Projekti A

$$H = 5000 \text{ €}$$

$$k = 1000 \text{ €/kk}$$

$$T = 12 \text{ kk}$$

B Projekti B

$$H = 60000 \text{ €}$$

$$k = 1000 \text{ €/kk}$$

$$T = 6 \text{ vuotta}$$

SIMPERI TAPA EASKEA TAKAISINTAKSUAIKKA

A $\frac{H}{k} = \frac{5000 \text{ €}}{1000 \text{ €/kk}} = 5 \text{ kk}$ ok

B $\frac{H}{k} = \frac{60000 \text{ €}}{1000 \text{ €/kk}} = 60 \text{ kk} = 5 \text{ vuotta}$ ok

Jos permissiivertoinni valoitetaan toisesta -
lainalla niin, että toisesta on k, niin
laine-aiha on tulostin määrän n

olloin $i_{kk} = 0,003$ (3,66% p.a.)

A $k = \frac{i(1+i)^n}{(1+i)^n - 1} \cdot K_0$ merk. $(1+i)^n = X$

$$1000 \text{ €} = \frac{0,003 \cdot X}{X - 1} \cdot 5000 \text{ €} \quad | : 5000 \text{ €}$$

$$\Leftrightarrow 0,2 = \frac{0,003 \cdot X}{X - 1}$$

$$\Leftrightarrow 0,2 \cdot X - 0,2 = 0,003 \cdot X$$

$$\Leftrightarrow 0,197 \cdot X = 0,2$$

$$\Leftrightarrow 1,003^n = \frac{0,2}{0,197} \quad | \ln$$

$$\Leftrightarrow n \ln 1,003 = \ln 0,2 - \ln 0,197$$

$$\Leftrightarrow n = \frac{\ln 0,2 - \ln 0,197}{\ln 1,003} = \underline{\underline{5,05 \text{ kk}}}$$
 ok

$$\textcircled{B} \quad k = \frac{i(1+i)^n}{(1+i)^n - 1} K_0 \quad (1+i)^n = x$$

$$\Rightarrow 1000 \text{ €} = \frac{0,003 x}{x - 1} \cdot 60000 \text{ €} \quad |: 60000 \text{ €}$$

$$\Rightarrow \frac{1000}{60000} = \frac{0,003 x}{x - 1}$$

$$\Rightarrow \frac{1000}{60000} \cdot x - \frac{1000}{60000} = 0,003 x$$

$$\Rightarrow \left(\frac{1000}{60000} - 0,003 \right) x = \frac{1000}{60000}$$

$$\Rightarrow x = \frac{1000}{60000} / \left(\frac{1000}{60000} - 0,003 \right)$$

$$\Rightarrow 1,003^n = \frac{1000}{60000} / \left(\frac{1000}{60000} - 0,003 \right) \quad | \ln()$$

$$\Rightarrow n \ln 1,003 = \ln \left(\frac{1000}{60000} \right) - \ln \left(\frac{1000}{60000} - 0,003 \right)$$

$$\Rightarrow n = \frac{\ln \left(\frac{1000}{60000} \right) - \ln \left(\frac{1000}{60000} - 0,003 \right)}{\ln 1,003}$$

$$= \underline{\underline{66,25 \text{ kk} = 5 \text{ vuotta } 6,25 \text{ kk}}}$$

Kaava $n = \frac{\ln \left(\frac{k}{H} \right) - \ln \left(\frac{k}{H} - i \right)}{\ln(1+i)}$

$$= \frac{\ln \left(\frac{k}{k - iH} \right)}{\ln(1+i)}$$

$i = 0,006 \rightarrow n = 74 \text{ kk}$
 (7,44% p.a.)