$H = 40$

$H = 100 \frac{h}{h_{max}}$

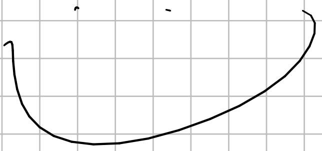
$h = H \cdot h_{max} \cdot \frac{1}{100}$ $\quad h_{max} = 0{,}36$

$h_0 = 0{,}144$

$a = \frac{\alpha}{2\sqrt{h_0}}$ $\quad \alpha = -0{,}0733$

$a = -9{,}66 \cdot 10^{-2}$

$b = \beta$



$k = \frac{1}{2} \alpha \sqrt{h_0} = 0{,}01390$

5.3)

c) $T = 33\,s$

$a_{0.5} = -\frac{1}{33}$

$a = 2a_{0.5} = -0{,}06$

d) $T = 20\,s$

$a = 2 \cdot \left(-\frac{1}{20}\right) = -0{,}1$

Større verdi, $a = \frac{\alpha}{2\sqrt{h_0}}$, større h_0 tilsvarer mindre a

f) $U = 20$ $\quad H = 50$ $\quad t = 48$

$u = U \cdot u_{max} \cdot \frac{1}{100} = 0{,}1108$

$h_0 = H \cdot h_{max} \cdot \frac{1}{100} = 0{,}18$

$b = \frac{1}{u} \cdot \frac{\Delta h}{\Delta t} = 0{,}034$ $\quad$ Stemmer ikke helt

5.4)

b) $K_p = 7,5$

c) Overdempet, når aldri stasjonærverdi

d) Avvik $= 2,7\%$

e) Avvik $= 0$

5.5)

a) Gain $= 7,5$ Bedre enn PI fordi ingen oversvingninger

$T_i = 20$

$T_d = 1$

b) $K_{pk} = 30$ $T_k = 9,5s$

$K_p = \underline{18}$

$K_i = 2{,}0 \cdot \frac{K_p}{T_k} = 3,79$

$K_d = \frac{1}{8} K_p T_k = 21$

$T_i = \frac{K_p}{K_i} = \underline{4,75}$

$T_D = \frac{K_D}{K_p} = \underline{1,17}$

NEI