

(2)

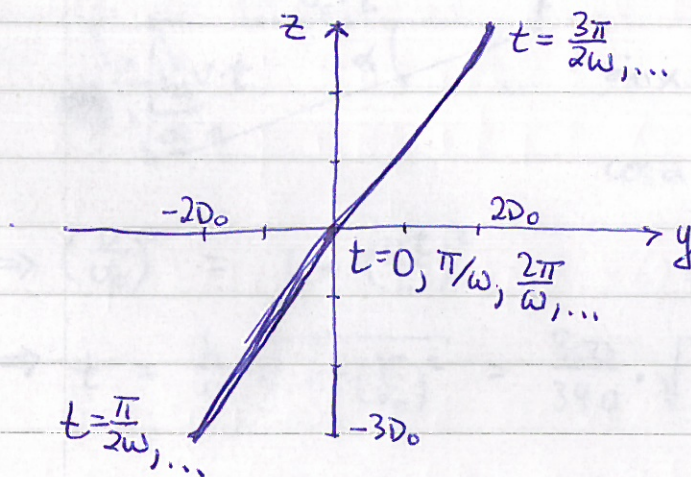
⑦ Fra formelsamling: $\frac{y_{ro}}{y_{to}} = \frac{\sqrt{\mu_2} - \sqrt{\mu_1}}{2\sqrt{\mu_1}}$

$$\left. \begin{array}{l} v_i = \sqrt{S/\mu_i} \quad ; \quad i=1,2 \\ v_i = \lambda_i f \quad ; \quad i=1,2 \end{array} \right\} \Rightarrow \sqrt{\mu_i} = \frac{\sqrt{S}}{\lambda_i f} \quad ; \quad i=1,2$$

$$\Rightarrow \frac{y_{ro}}{y_{to}} = \frac{\frac{1}{\lambda_2} - \frac{1}{\lambda_1}}{\frac{2}{\lambda_1}} = \frac{\lambda_1 - \lambda_2}{2\lambda_2} \stackrel{\text{Fra figur!}}{=} \frac{4 - \frac{8}{6}}{2 \cdot \frac{8}{6}} = 1$$

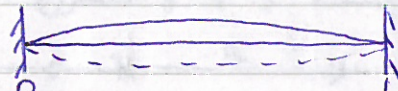
(C)

⑧ $\vec{D}(x,t) = (2D_0 \hat{y} + 3D_0 \hat{z}) \sin(kx - \omega t)$
 Se på f.eks $x=0$: $-(2\hat{y} + 3\hat{z})D_0 \sin \omega t$



Dvs lineær-
polarisert

(B)

⑨  $L = \frac{\lambda}{2} = 0.75 \text{ m}$

$$\Rightarrow f = \frac{v}{\lambda} = \frac{\sqrt{S/\mu}}{\lambda} = \frac{\sqrt{S \cdot L/\mu}}{2L} = \sqrt{\frac{S}{4\mu L}} = \sqrt{\frac{173}{4 \cdot 0.006 \cdot 0.75}} \text{ Hz}$$

$$= 98 \text{ Hz}$$

(D)