

Title undertext

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# Chapter 1

## Chapter Title

### 1.1 Section Title

$$\sin^2 x + \frac{1}{2} \sin x = \frac{1}{2} \quad (\sin x)^2 = \sin^2 x.$$

$$\begin{aligned} u^2 + \frac{1}{2}u - \frac{1}{2} &= 0 \\ \sin x &= \frac{\pm\sqrt{(\frac{1}{2}) - 4 \cdot 1 \cdot (-\frac{1}{2})}}{2 \cdot 1} \\ &= \frac{1}{2} \pm \sqrt{\frac{4}{4}} \\ &= \frac{-\frac{1}{2} + \frac{3}{2}}{2}. \end{aligned}$$

$$\sin x = \frac{1}{2} \quad \cup \quad \sin x = -1.$$

$$x = \frac{\pi}{6} + k \cdot 2\pi \cup x = \frac{5\pi}{6} + k \cdot 2\pi \cup x = \frac{3\pi}{2} + k \cdot 2\pi.$$

# Chapter 2

## oppgaver

$$\left(\sin x + \frac{1}{2}\right) \left(\sin x - \frac{\sqrt{3}}{2}\right) = 0 \text{ når } x \in [0, 360^\circ] \quad (2.1)$$

når likningen går mot 0 må en av faktorene være lik null. denne kan være

$$\begin{aligned} \sin x + \frac{1}{2} &\rightarrow \sin x = -\frac{1}{2} \\ \sin x - \frac{\sqrt{3}}{2} &= 0 \rightarrow \sin x = \frac{\sqrt{3}}{2}. \end{aligned}$$