

7.1

En ovn mærket 3\*380 V, 5,0 kW indeholder tre ens varmelegemer i stjernekobling.

Bestem

- den optagne strøm
- varmelegemernes modstand.

$$U_N := 380 \cdot V$$

$$P := 5 \text{ kW}$$

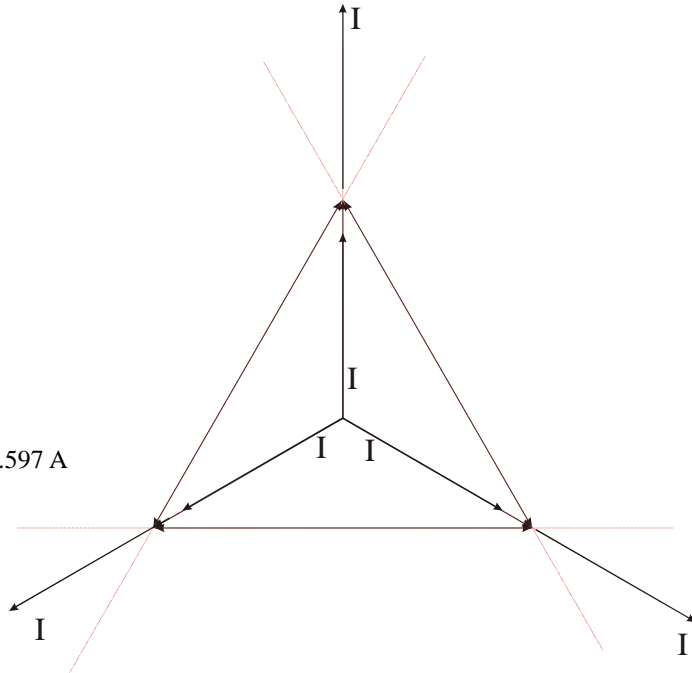
$$\cos\phi := 1$$

a) den optagne strøm

$$P = \sqrt{3} \cdot U_N \cdot I_N \cdot \cos\phi$$

↓

$$I_N := \frac{P}{\sqrt{3} \cdot U_N \cdot \cos\phi} = 7.597 \text{ A}$$



b) varmelegemernes modstand

$$R := \frac{U_N}{\sqrt{3} \cdot I_N} = 28.88 \Omega$$