$$kN = kilo - Newton$$

$$m = meter$$

$$03_{hyp} = \sqrt{(1^2 + 4^2)} = 4.123106\,m$$

$$\Sigma F\ horizontal = H_0 = 0$$

$$\Sigma F\ op - ned \text{ —> } F_0 + F_2 = 118.2\,kN$$

F_2: *For at regne skal vi bruge denne formel:*

$$Ft_{bro} * r_1 + Ft_{bil} * 0 - 3_{hyp} * \sin(\theta_3)$$

$$98.2\,kN * 4\,m + 20\,kN * 4.123106\,m * \sin(14.03624347°) = 51,59989\,kN$$

$$F_2 er = 51,59989\,kN$$

$$F_0 = 118.2 - 51,59989 = 66.60011\,kN$$

$$F_{03} = \frac{-F_0}{\sin(\theta_0)}$$

$$F_{03} = \frac{-66.60011}{\sin(75.96375653)} = -68,64982\,kN$$

$$F_{14} : -\frac{F_2}{\sin(\theta_0)}$$

$$F_{14} = \frac{-51,59989}{\sin(75.96375653)} = -53,18795\,kN$$

$$F_{01} : -F_0 \cos(\theta_0)$$

$$F_{01} = -66.60011 \cos(75.96375653) = 16,1529\,kN$$

$$F_{21} : -F_2 \cos(\theta_0)$$

$$F_{21} = -51,59989 \cos(75.96375653) = 12,51481\,kN$$

F_{23}: *her skal vi bruge en formel den laver jeg ved at isolere* F_{23}

$$F_{23} * \sin(\theta_{2hv}) + Ft_{bil} = Ft_0$$

$$\frac{F_{23} * \sin(\theta_{2hv})}{\sin(\theta_{2hv})} + \frac{Ft_{bil}}{\sin(\theta_{2hv})} = \frac{Ft_0}{\sin(\theta_2)}$$

$$F_{23} + \frac{Ft_{bil}}{\sin(\theta_{2hv})} = \frac{Ft_0}{\sin}(\theta_{2hv})$$

$$F_{23} = \frac{Ft_0}{\sin(\theta_{2hv})} - \frac{Ft_{bil}}{\sin(\theta_{2hv})}$$

sætter ind:

$$F_{23} = \frac{66.60011}{\sin(53.13010235)} - \frac{20}{\sin(53.13010235)} = 58,25014\,kN$$

$$F_{23} = 58,25014\,kN$$

F_{24}: *bruger en formel og isolere* F_{24}

$$F_{24} * \sin(\theta_{2hv}) = F_2$$

$$\frac{F_{24} * \sin(\theta_{2hv})}{\sin(\theta_{2hv})} = \frac{F_2}{\sin(\theta_{2hv})}$$

$$F_{24} + \sin(\theta_{2hv}) = \frac{F_2}{\sin(\theta_{2hv})}$$

$$F_{24} = \frac{\frac{F_2}{\sin(\theta_{2hv})}}{\sin(\theta_{2hv})}$$

sætter ind:

$$F_{24} = \frac{51,59989}{\sin\,(53,1301)} = 64,49986\,kN$$