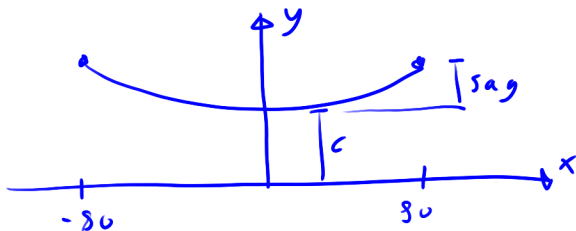


No class Wednesday or Friday

No homework this weekend

Quiz 3

Problem 3 will be removed



$$y = c \cosh(x/c)$$

$$y_{\text{end}} = c \cosh(80/c)$$

$$\text{sag} + c = c \cosh(80/c)$$

$$\begin{aligned} T_{\text{max}} &= w y_{\text{end}} \\ &= w (\text{sag} + c) \end{aligned}$$

$$\frac{T_{\text{max}}}{w} = \text{sag} + c$$

$$\frac{T_{\text{max}}}{w} = c \cosh(80/c)$$

$$\frac{400}{2} = c \cosh(80/c)$$

Numerically solve

$$c = 31.6$$

$$\frac{T_{\text{max}}}{w} = \text{sag} + c$$

$$\frac{T_{\text{max}}}{w} - c = \text{sag}$$

$$\frac{400}{2} - 31.6 = 168 \text{ ft}$$

$$c = 182$$

$$\frac{400}{2} - 182 = 18 \text{ ft}$$