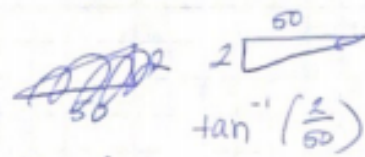
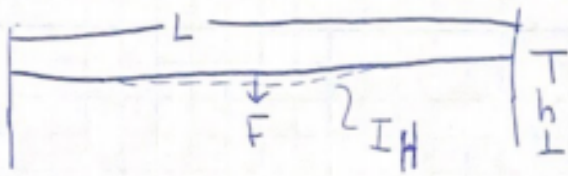


Zip line Slay - Use to determine how high we will hang the wire.



angle of slay = 2.29°

$$H = \frac{2}{100} \times L_{\text{cable}} \Rightarrow \frac{2}{100} \times 100\text{ft}$$

= 2 ft of slay (about) this is

for the average child, so due to the child being under developed and the addition to the pike we can assume the force will be about equal to the weight of an average child. However, to be safe we will add about $\pm 1/2$ foot to the assumed sag.

From this we decided to hang the wire about 7 feet off the ground, so that in the middle, when there is max displacement, she will have plenty of room before reaching the ground. We are assuming the apparatus has the height of 3 ft, this will give us about 2 feet of clearance below the apparatus to the ground.