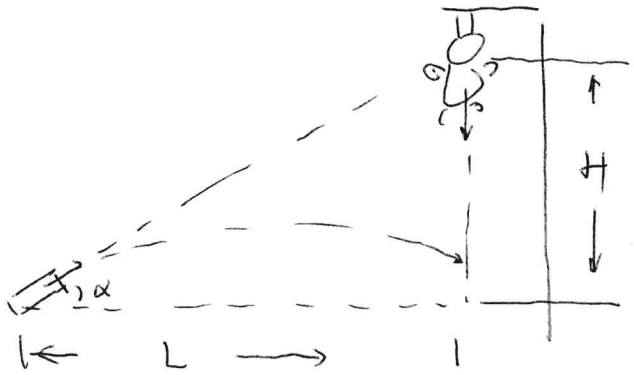
The monkey and the hunter problems.




$L = H/\tan\alpha$

The time it takes for the bullet to reach the monkey

$$t = L / v\cos\alpha$$

As a result, the position of the bullet at time $t$

$$y_1 = (v\sin\alpha)t - \frac{1}{2}gt^2 = L\tan\alpha - \frac{1}{2}gt^2$$

the position of the monkey at time $t$

$$y_2 = H - \frac{1}{2}gt^2$$

Since $L = H/\tan\alpha$, $y_1 = y_2$ Monkey will be hitted!