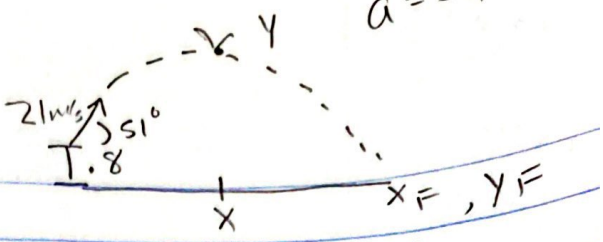
2-11 projectile motion

2-11-3



A) what is the speed of the ball at the max height of the seagull?

$V_x = 21\cos(51) = \sqrt{13.21\ m/s^2 + 0^2}$

$= 13.21\ m/s$

B) what was the height of the seagull when it was hit?

$y = .8 + \left(\frac{0^2 - 21\sin 51^2}{2(-9.81)}\right) = \frac{-266.3}{-19.62}$

$y = .8 + 13.57 = 14.37$

C) $X = X_0 + V_{0x}\Delta T$

Solve for t first =

$V_y = V_{y0} + a_y \Delta T \quad = t = V_y - V_y / -9.81$

$\frac{0 - 16.32}{-9.81}$

$0 + (13.21 \cdot 1.6636) = X$

$21.97\ ft$

Scanned with CamScanner