Day 5 HW

Sunday, February 22, 2015 1:15 PM

p. 530: 43-45, 47, 50

(43) a) 2.80sec
b) 7.18 ft
c) in your words...

(44) a) no.. 5.4ft short
b) no... too high

(45) a) yes!
b) by ≈ 1.59ft

(47) no! about .9ft short

(50) a) 506.25ft
b) 650.82ft
c) 775.82ft
d) 876.85ft

(43) a) $400 = (150\cos 18)t$

$t = 2.80\text{sec}$

b) $y = -16(2.80)^2 + (150\sin 18)(2.80) + 3$

$y = 7.18\text{ ft}$

c) an outfielder can jump or reach a height of 7.18. if the ball was hit at 20°, it would have hit the wall, 19.74 - an outfielder couldn't jump that high

(45) $x = (120\cos 30 + 5)t$

$y = -16t^2 + (120\sin 30)t + 4$

a) $350 = (120\cos 30 + 5)t$

$t = 3.21$

$y = 31.59\text{ ft}$ YES!!

b) by ≈ 1.59ft

(50) $x = (180\cos\theta)t$

$y = -16t^2 + (180\sin\theta)t$

a) $0 = -16t^2 + (180\sin 15)t$

$t = 2.811$

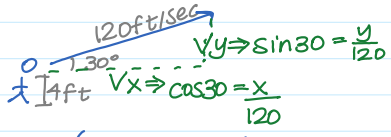
$y = 506.25$

b) 650.82ft

c) 775.82ft

d) 876.85ft

(44)



$x = (120\cos 30)t$

$y = -16t^2 + (120\sin 30)t + 4$

a) $350 = (120\cos 30)t$

$t = 3.37\text{sec}$

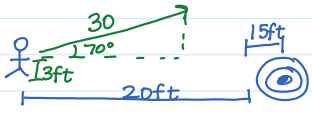
$y = -16(3.37)^2 + (120\sin 30)(3.37) + 4$

$y = 24.59\text{ft}$

NO... 5.4ft short

b) NO... can't be caught (too high on the WALL)

(47)



$x = (30\cos 70)t$

$y = -16t^2 + (30\sin 70)t + 3$

$0 = -16t^2 + (30\sin 70)t + 3$

$t = 1.86\text{sec}$

$x = (30\cos 70)(1.86)$

$x = 19.11\text{ ft}$ NO! about .9ft short