Name:	Date:		
Mr. Croom's Physics	Chapter 3: Two Dimensional Motion		

	Advanced Non-Symmetrical Projectile Motion1										
1.	(Giancoli. p. 73 #38) A rescue plane wants to drop supplies to isolated mountain climbers on a rocky ridge 235 m below. If the plane is traveling horizontally with a speed of 250 km/h how far in advanced of the recipients (horizontal distance) must the good be dropped? Suppose instead they release them at a horizontal distance of 425 m ahead of the climbers. What vertical velocity (up or down) should the supplies be given so they arrive precisely at the climber position. With what speed do the supplies land in the later case?										
2.	A projectile is fired horizontally from a height of 49 m. The projectile lands 70 meters away on the ground. What is the projectiles initial velocity in rectangular form? What is the total time the projectile is in the air? What is the final velocity of the projectile in rectangular form?										
3.	(Serway. p. 111 #48) A daredevil jumps a canyon 12 m wide. To do so, he drives a car up a 15° incline which is 5m long. He lands back on the flat ground on the other side. What is the minimum speed he must achieve to clear the canyon? If the daredevil jumps at this minimum speed what will his speed be when he reaches the other side?										

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4.	high. If she s	hoots the ball soop without s	at a 45° angle	sketball player attempts a goal 10.00 m from the basket which is 3.05 m gle, at what initial speed must she throw the basketball so that it goes backboard? How long is the ball in the air? What is the maximum height of					
5.		09 #31) The swere thrown hos Ryan's pitch	orizontally, th	ne ball would	l fall 0.809r	n by the tim	ne it reached t	the plate 18.3	
6.	horizontally	73 #39) A badoes the ball tr zontally has th	avel before h	nitting the gr	ound? How	long is it in	the air? Wha	at is its maxii	

9. A boy stands 4 m from a vertical wall and throws a ball. The ball leaves the boys hand at 2 m above the ground with an initial velocity of $\vec{V_o} = (10\hat{i} + 10\hat{j})m/s$. When the ball hits the wall, the horizontal component of the velocity is reversed and the vertical component remains unchanged. A) Where does the ball hit the ground?

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