

⊖ Projectile Practice – (from lecture)

1. A baseball player leads off the game and hits a long home run. The ball leaves the bat at an angle of 30.0° from the horizontal with a velocity of 40.0 m/s. How far will it travel in the air?			
Known	Formula	Work	Answer
2. A golfer is teeing off on hole 3, a 170.0 m long par 3. The ball leaves with a velocity of 40.0 m/s at 50.0° to the horizontal. Assuming the golfer hits the ball on a direct path to the hole, how far from the hole will the ball land (no bounces or rolls)? [ignoring spin & air resistance]			
Known	Formula	Work	Answer
3. A punter in a football game kicks a ball from the goal line at 60.0° from the horizontal at 25.0 m/s. <ul style="list-style-type: none"> a. What is the hang time? b. How far downfield does the ball land? 			
Known	Formulas	Work	Answers
4. At the JCHS vs Putnam Co. football game. The Monticello cheerleaders launch a Hurricane shirt into the stands using an air cannon thing. This specific air cannon launches your typical L t-shirt with a velocity of 13.4 m/s. The cheerleader holding the cannon pointed up 40° above the horizontal and proceeded to shoot it up into the stands. <ul style="list-style-type: none"> a. What is the initial velocity of the shirt (horizontal and vertical)? b. How long did it take to reach the apex of the t-shirt's trajectory? c. How high did the t-shirt go up in the air? d. How long was it in the air for, if it landed on row H, 22 meters away? e. How high is row H in the bleachers? 			
Known	Formulas	Work	Answers