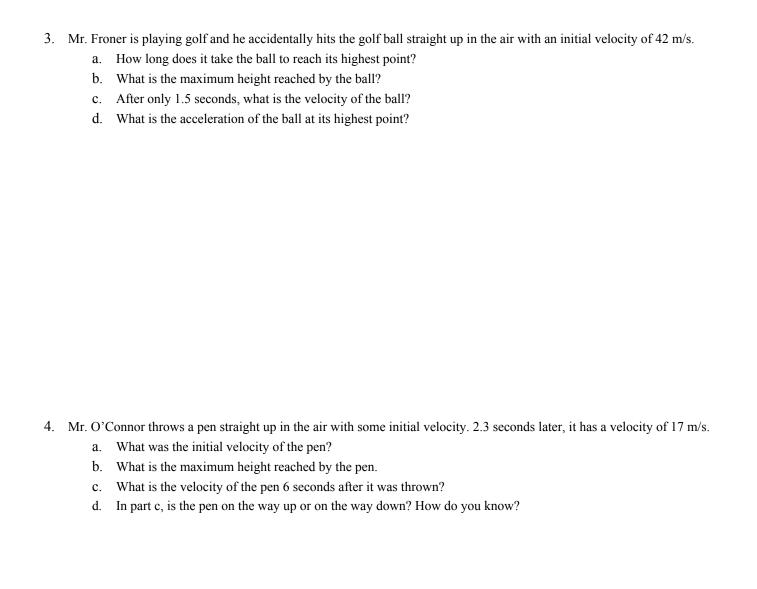
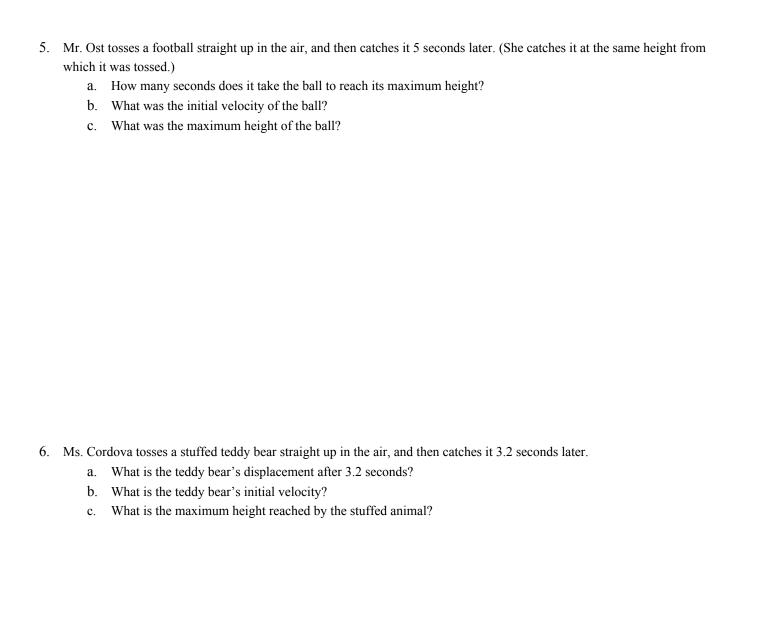
Name _.		
	Per	
	Date	

Constant Acceleration - Free Fall

- 1. Mr. Klein throws a ball straight up in the air with an initial velocity of 20 m/s.
 - a. How long will it take the ball to reach its highest point?
 - b. What is the maximum height reached by the ball?
 - c. How many total seconds is the ball in the air?

- 2. Your BFF, Mr. Schuck, is playing soccer, and you see him kick the ball straight up in the air. It takes 3.5 seconds for the ball to reach its highest point.
 - a. What was the initial velocity of the ball?
 - b. What is the maximum height reached by the ball?
 - c. What is the total time the ball is in the air?
 - d. What is the velocity of the ball just as it reaches the ground again?





7.	Ms. Mischenko has a tennis ball that she throws straight up. The tennis ball reaches a maximum height of 30 meters above its
	release point

- a. How long would it take the tennis ball to fall back down from its maximum height? (What is the ball's velocity at the top of its trajectory?)
- b. How long did it take the ball to reach this maximum height?
- c. What was the initial velocity of the ball?

8. A cat is thrown down off a cliff that is 77 meters high with some initial speed. After 3.2 seconds it safely hits the ground where someone has conveniently placed a cushiony pillow. At what speed was the cat initially thrown at?

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s/m 85.8- .
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^{7.} a) 2.47 s b) 2.47s c) 24.24 s

^{5.} a) 2.5 s b) 24.5 m/s c) 30.63 m

^{4.} a) 39.54 m/s b) 74.76 m c) -39.54 m/s

^{3.} a) 4.29 s b) 90 m c) 27.3 m/s d) -9.8 m/s²

^{2.} a) 34.3 m/s b) 60.02 m c) 7 (5 m s) 34.3 m/s

^{1.} a) 2.04s b) 20.4 m c) 4.08s