

Name: _____

Mr. Croom's Physics

Date: _____

Chapter 4: Force and the Law of Motion

5. When an elevator is stopped on the 5th floor of a building a person standing in the elevator weighs 750N. The elevator then begins to descend accelerating downward at 2m/s^2 . What is the persons weigh during this period?
- b. The elevator then stops accelerating and begins to move down at a constant rate. What is the person weight at this time?
- c. Just before the ground floor the elevator begins to slow down by accelerating up at 2m/s^2 . What is the persons weight at this time?
- d. Finally the elevator comes to rest at the ground floor. What is the person weight now?
6. If the same person in problem 5 rides the elevator back up to the 5th floor, accelerating up at 2m/s^2 , then moving at a constant rate, then slowing down at the top at a rate 2m/s^2 , finally reaching the 5th floor, what does the person weigh during each interval going back up?