

1. A 70.0 kg man is riding an elevator **up** 5 stories.
 - a. Draw a free body diagram of the man.
 - b. What is the man's weight? **686 N**
 - c. If he accelerates at 1.87 m/s^2 on the way UP, what is his apparent weight? **816.9 N**
 - d. If he slows down with an acceleration of -2.14 m/s^2 to stop at his floor, what is his apparent weight? **536.2 N**

2. A 47.5 kg woman is riding an elevator **down** 3 stories.
 - a. Draw a free body diagram of the woman.
 - b. What is the woman's weight? **465.5 N**
 - c. If her apparent weight as the elevator begins moving down is 390 N, what is her acceleration? **-1.589 m/s^2**
 - d. If her apparent weight as the elevator is slowing down is 500 N, what is her acceleration? **$+0.726 \text{ m/s}^2$**