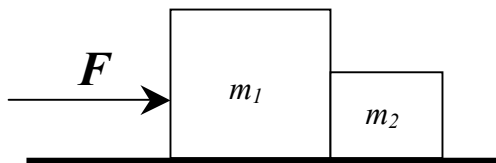


PY211 Spring 2007
Conceptual Exercises 2

Consider a person standing in an elevator that is accelerating upward.

1. Draw a free-body diagram of the person.
2. The upward normal force n exerted by the elevator floor on the person is:
 - a) larger than the weight of the person
 - b) equal to the weight of the person
 - c) smaller than the weight of the person

Two blocks sitting on a frictionless table are pushed from the left by a horizontal force as shown below.



3. Draw free body diagrams for each of the two blocks below, label the action-reaction pairs and calculate their acceleration.
4. Now consider two boxes sitting on a frictionless table connected by a string with tension T_1 . A second string with tension T_2 pulls the boxes to the right, as shown below. Draw free-body diagrams for each of the two boxes and calculate their acceleration.

