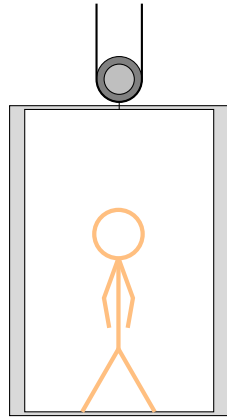


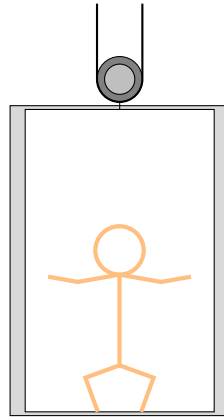
## The Elevator Effect

When do you are riding in an elevator, there are some times that you feel heavier and some times that you feel lighter.

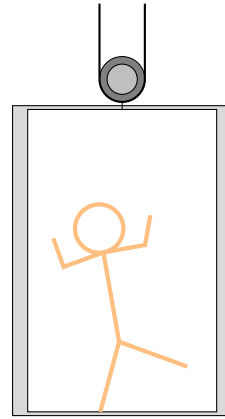
(a) Draw a Free-Body Diagram for each of these situations:



stationary elevator



accelerating upward



accelerating downward

(b) Write an expression for the normal force in each situation above.

(c) Which force corresponds to “how heavy” you feel?

(d) How could you use an elevator to simulate weightlessness?