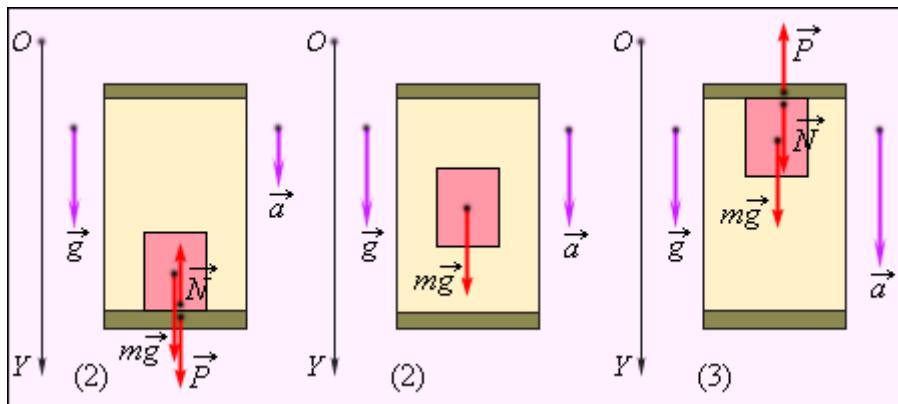Answer on question 50528

The general definition of Weight

Weight is the force exerted on the support body

Consider three situations:

Box located on the floor of the elevator. Elevator moves with entrenched down.

Y axis is directed vertically downwards. Acceleration vector pointing down the elevator too.

The general formula for the weight of the box that is on the floor of the elevator is.

P = m (g-a)

1. Consider the first case g> a then the weight of the box is a positive

2. If g = a then the weight of the box is zero and the box will not press with force to the floor of the elevator

3. g <a box then pressed against the ceiling of the elevator and the weight of the box is negative.