Physics I - Elevators and Apparent Weight

Actual Weight =

Apparent Weight =

Often \_\_\_\_ = \_\_\_\_ , but not always!

Consider a person in an elevator…

At rest Constant Velocity (up or down)

Slowing Down While Rising Slowing Down While Descending

Speeding Up While Rising Speeding Up While Descending

What happens of the elevator cord is cut?

Ex) If a 55 kg person in an elevator accelerates downwards at 1.5 m/s2. What fraction of their original weight do they seem to have?

Ex) If a rope can withstand 200 N of tension before breaking, how quickly can you lift (accelerate) a 10 kg box before the rope breaks?