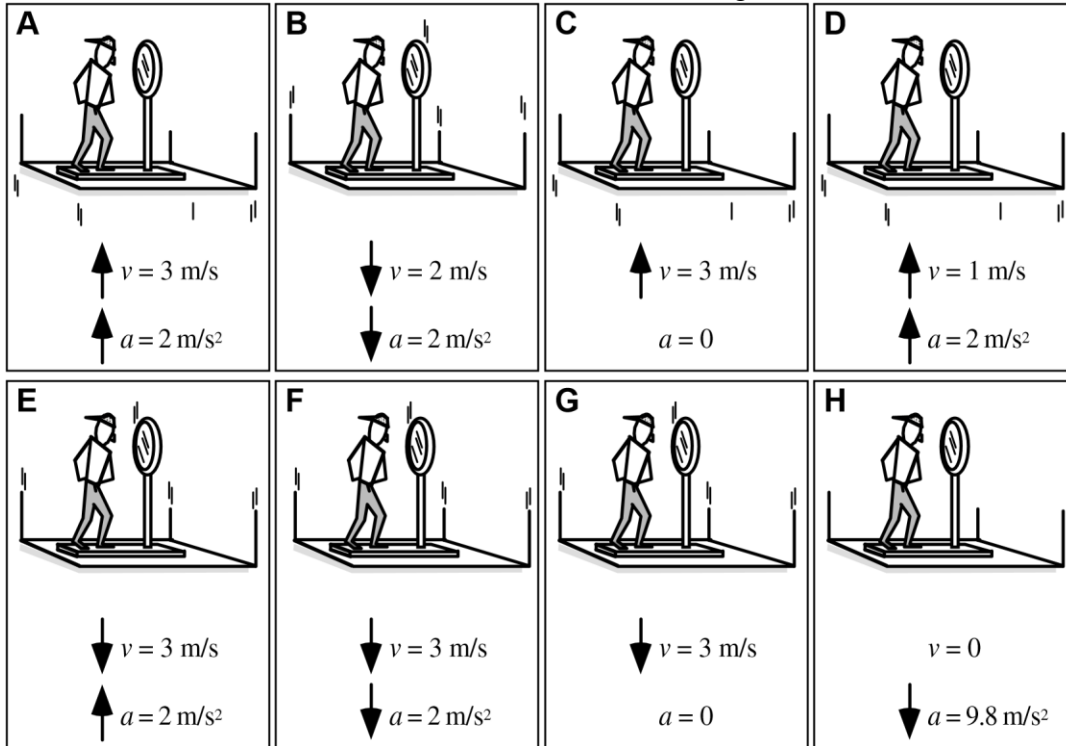


**B3-QRT63: PERSON IN AN ELEVATOR—SCALE READING**

A person who weighs 500 N is standing on a scale in an elevator. The elevator is identical in all cases. The velocity and acceleration of the elevators at the instant shown are given.



(a) List the cases where the scale reading is *greater than* 500 N. Explain your reasoning and draw the forces acting on the person for each.

(b) List the cases where the scale reading is *less than* 500 N. Explain your reasoning and draw the forces acting on the person for each.

(c) List the cases when the scale reading is *equal to* the scale reading of 500 N. Explain your reasoning and draw the forces acting on the person for each.