

Scales in an Elevator

A person brings a bathroom scale into an elevator.

For each of the following situation, evaluate whether the relationship between the given forces is less than, greater than, equal to, or can't tell and explain your reasoning.

- a. The elevator is at rest.

$$F_{\text{scale on man}} \quad \boxed{} \quad F_{\text{gravity on man}}$$

Explanation:

- b. The elevator is moving downward at a constant speed

$$F_{\text{scale on man}} \quad \boxed{} \quad F_{\text{gravity on man}}$$

Explanation:

- c. The elevator is moving downward at an increasing speed.

$$F_{\text{scale on man}} \quad \boxed{} \quad F_{\text{gravity on man}}$$

Explanation:

d. The elevator is moving upward at a decreasing speed.



Explanation:

e. The elevator is at rest on the 30th floor.



Explanation: