

I-71

A man stands on a bathroom scale inside of an elevator. For each of the following situations, circle the correct relationship symbol between the force of the scale on the man and the force of gravity on the man and explain your reasoning.

a. The elevator is at rest.

$F_{\text{scale on man}}$ $>$ $=$ $<$ $?$ $F_{\text{gravity on man}}$
Explanation:

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

$F_{\text{scale on man}}$ $>$ $=$ $<$ $?$ $F_{\text{gravity on man}}$
Explanation:

c. The elevator is moving downward at a increasing speed.

$F_{\text{scale on man}}$ $>$ $=$ $<$ $?$ $F_{\text{gravity on man}}$
Explanation:

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

$F_{\text{scale on man}}$ $>$ $=$ $<$ $?$ $F_{\text{gravity on man}}$
Explanation:

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