**Solution 1.19E**

An astronaut took his scales with him to space. It is to be determined how much he will weigh on the spring and beam scales in space.

***Analysis*** (*a*) A spring scale measures weight, which is the local gravitational force applied on a body:



(*b*) A beam scale compares masses and thus is not affected by the variations in gravitational acceleration. The beam scale will read what it reads on earth,

