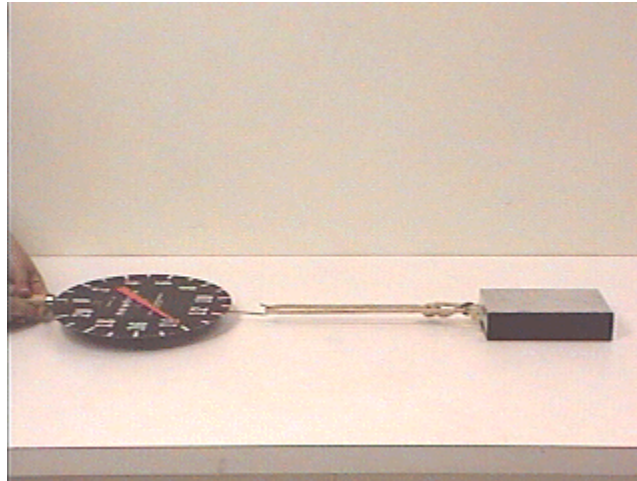# Question #134

An aluminum block with a layer of rubber matting attached to its underside is to be slid across the table by a rope, as seen in the photograph below. A spring scale is attached to the rope to measure exactly how much force must be applied in order to start the aluminum block moving and keep it moving at a *constant velocity*.

The question is what force must be applied as a function of time to create the motion described above. What force will the spring scale indicate as time goes by?

The force read by the spring scale will:

- (a) rise slowly to a maximum value and remain at that value.
- (b) rise slowly to a maximum value and drop back rapidly to a slightly smaller value to maintain the constant velocity.
- (c) rise slowly to some value to start the motion then jump rapidly to a higher value to maintain the constant velocity.
- (d) rise to a maximum value and drop back to zero to maintain a constant velocity.
- (e) other.

Click here for Answer #134 after January 13, 2003.

For questions and comments regarding the *Question of the Week* contact

[Dr. Richard E. Berg](#) by e-mail or using phone number or regular mail address given on the [Lecture-Demonstration Home Page](#).