Answer #134

The answer is (b): rise slowly to a maximum value and drop back rapidly to a slightly smaller value after the block begins to move, as seen in an mpeg video by clicking your mouse on the photograph below.



The coefficient of static friction is greater than the coefficient of kinetic, or sliding, friction. Therefore the greatest force is required to *start* the motion by overcoming the initially static friction. After the block is moving, the (kinetic) friction becomes less, so the force required to maintain the small but constant velocity becomes less, as can be seen in the video.

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For questions and comments regarding the *Question of the Week* contact <u>Dr. Richard E. Berg</u> by e-mail or using phone number or regular mail address given on the <u>Lecture-Demonstration Home Page</u>.