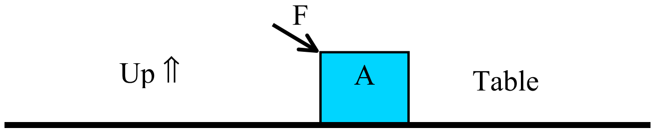
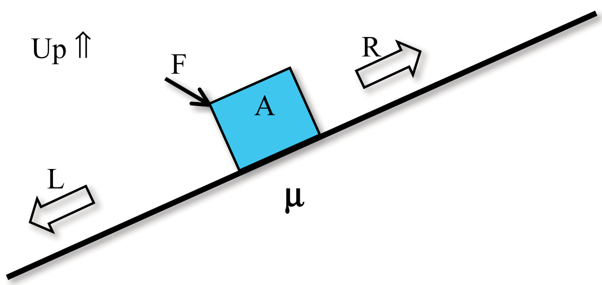


There may or may not be friction between the block and the table. Now, assume that the block ***moves to the right*** at constant velocity. Which of the following is true (only one is correct)?

1) This is possible without any friction
2) This is impossible without friction; it ***might*** be possible if there is friction between block and table. Need more info to be sure.
3) This is impossible without friction; it ***definitely would*** be possible if there is friction between block and table
4) This is impossible even if there is friction

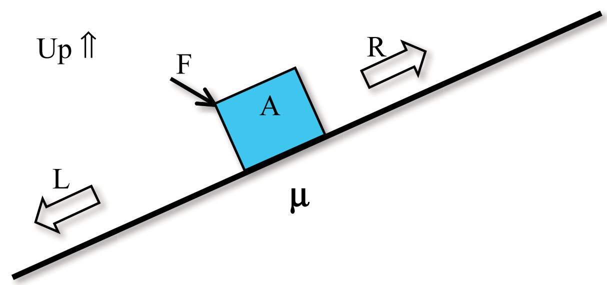
If you got the right answer today to the previous question, I'm interested in your thought processes.

1) I got the right answer before and I think I understand it (be honest, only 25 of you answered correctly last week).
2) I got the right answer before but I don't really understand it (be honest, only 25 of you answered correctly last week).
3) I remembered that this was the right answer from last week and I think I understand it.
4) I remembered that this was the right answer from last week but I don't really understand it.
5) I remembered that this was the right answer from last week but I don't really believe it.
6) I didn't remember that this was the right answer from last week but I figured it out on my own today.
7) I made a wild guess.



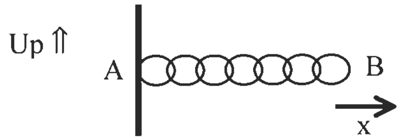
You know that there is friction between the block and the table. Assume that the block ***moves down the incline***. Which of the following is true (only one is correct)?

1) The force of friction is zero
2) The force of friction obviously points in direction L.
3) The force of friction obviously points in direction R.
4) This situation is physically impossible.
5) I can't tell what is going on without a detailed calculation.



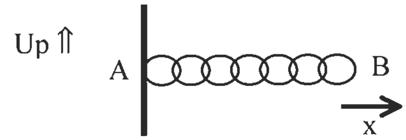
You know that there is friction between the block and the table. Assume that the block ***does not move*** at all. Which of the following is true (only one is correct)?

1) The force of friction is zero
2) The force of friction obviously points in direction L.
3) The force of friction obviously points in direction R.
4) This situation is physically impossible.
5) I can't tell what is going on without a detailed calculation.



A horizontal spring with constant k is stretched a distance x. The magnitude of the force(s) exerted by the spring is (are) given by:

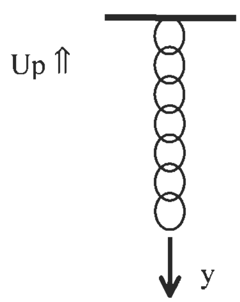
1) kx at point B and zero at point A
2) kx at point A and zero at point B
3) kx/2 at both point A and B
4) kx at both point A and B
5) None of the above



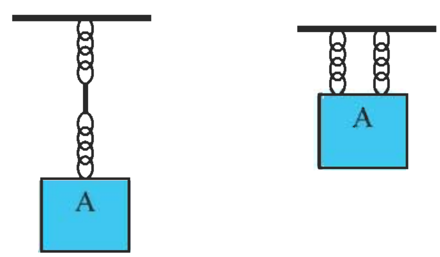
A horizontal spring with constant k is stretched a distance x. I claim that the magnitude of the forces exerted by the spring at its two ends are equal to each other.

1) This must be true by Newton's 3rd law (action/reaction)
2) This must be true if the spring is not accelerating
3) This is approximately true but only if I can ignore the spring's mass
4) None of the above

A vertical spring with constant k is stretched a distance y. I claim that the magnitude of the forces exerted by the spring at its two ends are equal to each other.



1) This must be true by Newton's 3rd law (action/reaction)
2) This must be true if the spring is not accelerating
3) This is approximately true but only if I can ignore the spring's mass
4) None of the above



Two identical blocks are held up by two identical springs either in series (left) or in parallel (right) Which is true?

1) In both cases, each spring holds up half of the mass and exerts a force of Mg/2.
2) In both cases, each spring exerts a force of Mg.
3) In series, each spring exerts a force of Mg/2. In parallel, each spring exerts a force of Mg.
4) In series, each spring exerts a force of Mg. In parallel, each spring exerts a force of Mg/2.
5) This situation is physically impossible.
6) I can't tell what is going on.