**1.**

A constant applied force is applied to an object, causing it to accelerate at 10 m/s2. If the mass is quadrupled and the applied force is halved, then the acceleration of the object will be less than 0.83 m/s2 if the friction interaction is not negligible.

A) True

B) False

**Correct answer(s):** False

**2.**

A motion diagram represents the position of an object in space at equally spaced intervals of time. Which of the following statements are correct interpretations of motion diagrams. (you may select more than one.)

A) When the spacing between consecutive dots on a motion diagram decrease, the object must have a non-zero net force acting on it.

B) When the spacing between consecutive dots on a motion diagram is equal, the net force acting on the object must be zero.

C) Overlapping dots in a motion diagram are impossible because that would imply an object can be in two places at the same time.

D) Any time the dots in a motion diagram make a curved path, there must have been a non-zero net force acting on the object during that part of its motion.

**Correct answer(s):** A, D

**3.**

A car is speeding up as it travels up a hill with a car rack carrying camping gear on top and towing a trailer loaded with cut wood. The net force on the car is:(there is only one best answer)

A) entirely due to the friction by the road on the car canceling the backward force by the trailer on the car.

B) Parallel to the road because the normal forces on the car by the road and the car rack are equal and in opposite directions and therefore cancel out.

C) the vector sum of 5 different interactions between the car and the elements in its environment.

D) is impossible to figure out because we don't know the mass of the three objects in the system.

**Correct answer(s):** C

**4.**

When I scored my work compared to the posted Workbook answers for this chapter, my score fell within a range between 0-100%. I actually went though the answers and compared them to mine, and gave myself 3 points if I was in complete (not exact) agreement with the answers, 2 points if I was definitely on the right track but I was sloppy, left something out and understand the improvement I could make, 1 point for the ones I tried on but wasn't very dedicated and/or didn't really seem to understand the line of thinking that the question was directing me toward. My zero pointers went toward all blank parts. I certify I actually did this kind of analysis of my work. My final score, while not perfect, was at least reportable.

Select **ALL** category ranges **below** your actual score **and** the option including your actual self score.

For example, if you scored 67%, because there were sooooooo many and you just couldn't get them all done, then select A, B, C, D, E, F AND G .

A) 0-10%

B) 11-20%

C) 21-30%

D) 31-40%

E) 41-50%

F) 51-60%

G) 61-70%

H) 71-80%

I) 81-90%

J) 91-100%

**Correct answer(s):** A, B, C, D, E, F, G, H, I, J