1) Clearly, and in an organized manner, restate Newton's Laws in your own words. The more complete and explicative they are, the better your grade will be! (6 pt)

2) What is the weight of a 55.25 kg block of wood? (2 pt)

3) A rocket weighs $3.5 \times 10^7$ N. Its engine exerts $+2.7 \times 10^8$ N of force at lift-off.
   a) What is the mass of the rocket? (2 pt)
   b) What is its acceleration when it lifts off? [Remember: NET Force] (4 pt)
   c) If the rocket maintains the acceleration from part (b) during its launch, what velocity would it reach at the end of $4.80 \times 10^2$ s? (3 pt)
A smooth wood block is placed on a smooth, flat wooden tabletop. If you exert an horizontal force of 15.5 N to keep the 56.3 N block sliding at a constant velocity:

a) Draw a force diagram, labeling all the forces (as variables, not numbers) acting on the block. (2 pt)

b) What is the magnitude of the net force on the block? (1 pt)

c) What is the magnitude of the normal force acting on the block? (1 pt)

d) What is the magnitude of the frictional force acting on the block? (1 pt)

e) What is the magnitude of the coefficient of sliding (kinetic) friction? (1 pt)

f) If a 35.0N brick is placed on top of (attached to) the block, what size horizontal force will be required to keep the block-brick mass moving at constant velocity? You can assume that the coefficient of sliding (kinetic) friction remains unchanged. (2 pt)