7-3)

Mass A (3 kg) and Mass B (1 kg) collide head-on on a frictionless surface. A was initially moving to the right at 0.2 m/s, while B was moving at 0.4 m/s to the left. The collision is completely elastic.

a) Find the velocity (magnitude and direction) for each mass after the collision. Treat this as a one dimensional problem.
b) Find the change in momentum for each mass. Compare.
c) Find the change in kinetic energy for each mass. Compare.