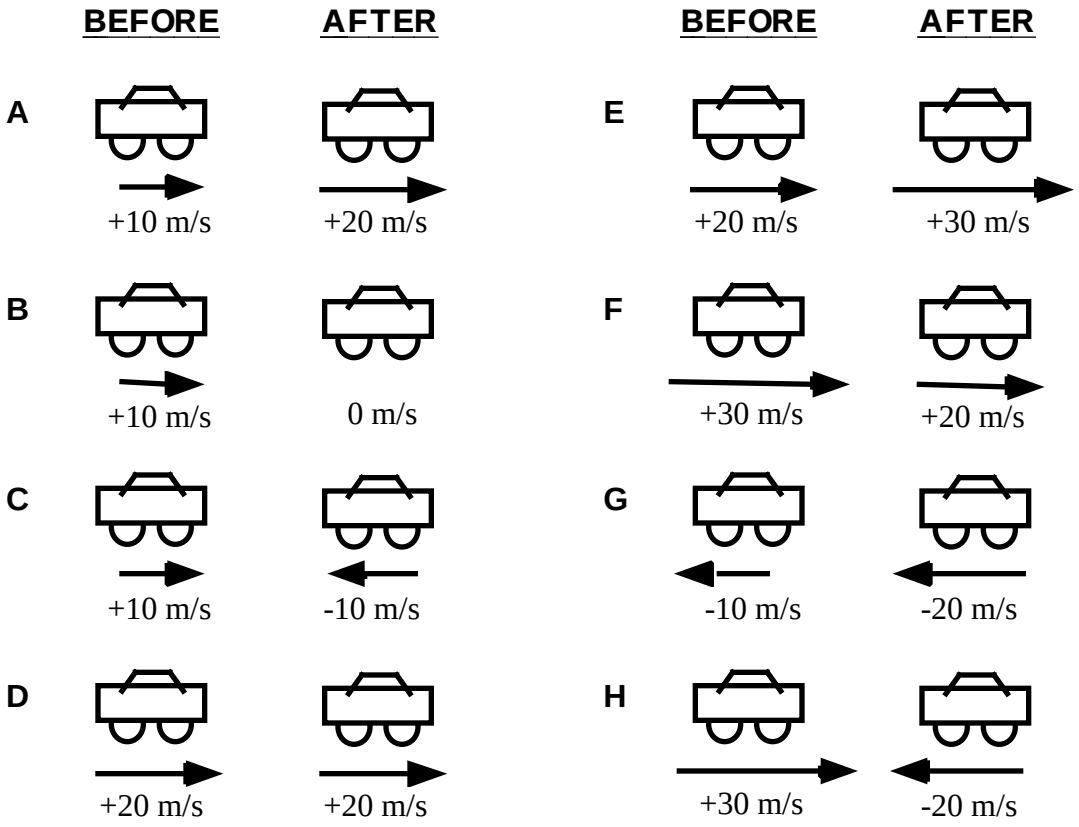
Cars—Change in Kinetic Energy During a Change of Velocity [66]

The eight situations below show *before* and *after* "snapshots" of a car's velocity. Rank these situations, in terms of the change in kinetic energy of these cars, from most positive to most negative. All cars have the same mass and have traveled the same distance during this change. Negative numbers, if any, rank lower than positive ones (-20 m/s < -10 m/s < 0 < 5).



Most Most
Positive 1_____ 2_____ 3_____ 4_____ 5_____ 6_____ 7_____ 8_____ Negative

Or, the change in kinetic energy is the same (but not zero) for all of these cases. _____

Or, the change in kinetic energy is zero for all of these cases. _____

Or, it is not possible to determine the change in kinetic energy for these cases. _____

Please carefully explain your reasoning.

How sure were you of your ranking? (circle one)

Basically Guessed Sure Very Sure

1 2 3 4 5 6 7 8 9 10

[66] J. Cole, D. Maloney, C. Hieggelke