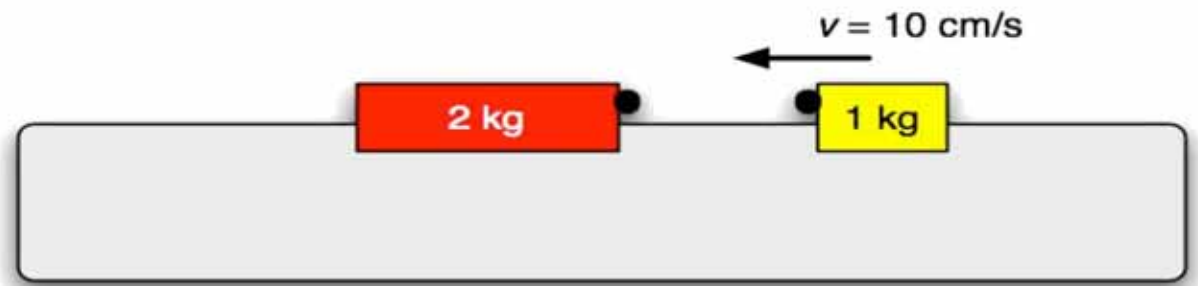


Two carts collide on an airtrack and stick together with velcro.

What is their speed after the collision?



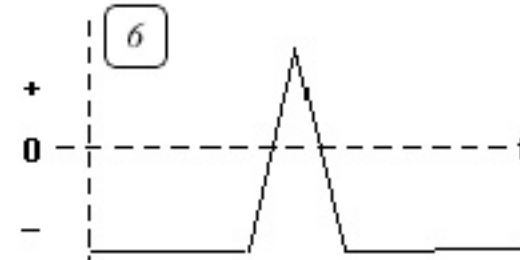
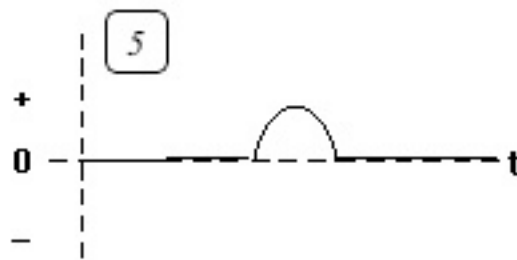
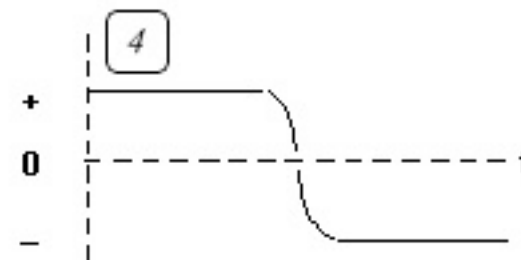
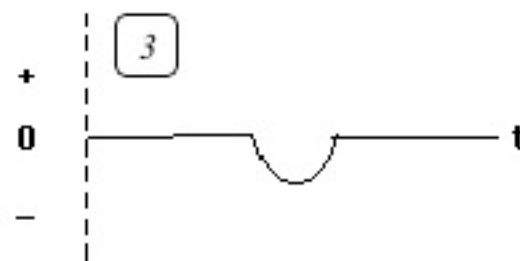
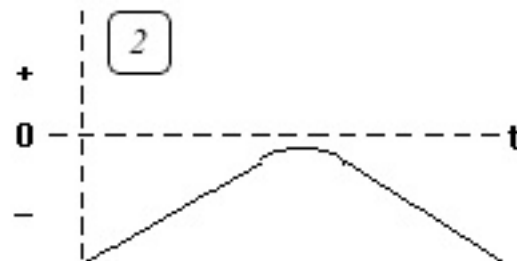
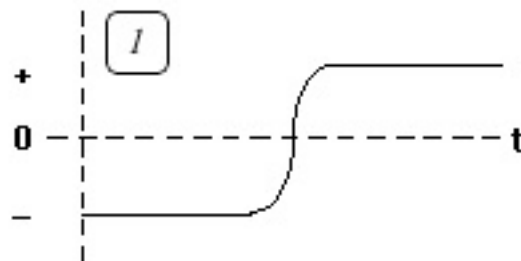
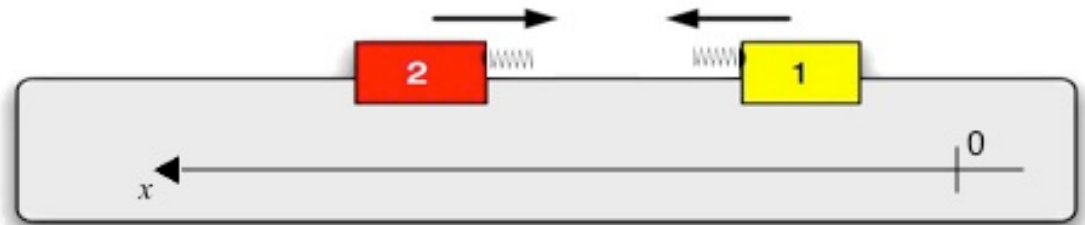
1. 10 cm/s
2. 0 cm/s
3. 5 cm/s
4. 3.3 cm/s
5. 2.5 cm/s
6. something else



Two carts on an air track are pushed towards each other. Initially, cart 1 moves in the $+x$ direction and cart 2 moves in the $-x$ direction. They bounce off each other elastically. The graphs at the right describe some of the variables associated with the motion as a function of time. Identify which graph is a possible display of that variable as a function of time.



- the momentum of cart 1
- the force on cart 2
- the force on cart 1
- the position of cart 1.
- the position of cart 2



7 None