

Problems discussed in the videos:

Videos (1) – (3)

57. A hockey puck moving at 32 m/s slams through a wall of snow 35 cm thick. It emerges moving at 18 m/s. (a) How much time does it spend in the snow? (b) How thick a wall of snow would be needed to stop the puck entirely?

Videos (4) – (5)

61. A racing car undergoing constant acceleration covers 140 m in 3.6 s. (a) If it's moving at 53 m/s at the end of this interval, what was its speed at the beginning of the interval? (b) How far did it travel *from rest* to the end of the 140-m distance?

Videos (6) – (8)

63. After 35 minutes of running, at the 9-km point in a 10-km race, you find yourself 100 m behind the leader and moving at the same speed. What should your acceleration be if you are to catch up by the finish line? Assume that the leader maintains a constant speed throughout the entire race.