Problem 6D Solutions

1. 3300kg)(0.05m/s) = 2.5 m/s )(x kg) x = 66 kg
2. (1250 kg)(0.24m/4s) = (1.4 m/s)(x) x = 53.5 kg
3. (60 kg + 114 kg) v0 = (60 kg( – 5.32) + 114 kg(3.40)

vo = ( – 319.2 kg m/s + 387.6 kg m/s)/(174) = 0.39 m/s

1. (50 kg + 5.4 kg) v0 = (50. kg( – 1.4 m/s) + 5.4 kg(7.4)

vo = ( – 70. kg m/s + 39.96 kg m/s)/(55.4) = – 0.54 m/s

1. (260 kg + 340 kg) v0 = (260 kg( – 2.5) + 340 kg(7.8)

vo = ( – 650 kg m/s + 2652 kg m/s)/(600 kg) = 3.3 m/s m/s

1. 3.6(x) – (3.0m/s )(2. Kg) = 0 x = 6/3.6 = 1.67 m/s
2. 60 kg (– 4.0 m/s) + 449 kg(x) = 0 x = 0.53 m/s

X = v(t) = 0.53(3) = 1.60 m