Physics A – Final Exam Review Solutions

1. R = 190 lb @ 25º S of E
     $-R$ = 190 lb @ 25º N of W
     Yes

2.   Range = 126 m; Height = 29.0 m
     Range = 131 m; Height = 34.0 m
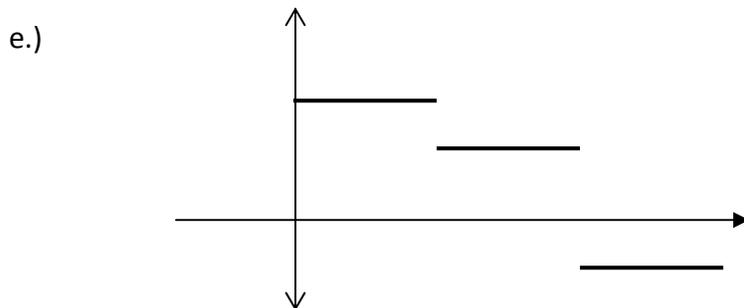
3.   Height = 2.64×10^6 m = 1641 miles

4. a_1 = -8.62 m/s^2; x_1 = 15.0m
     a_2 = -9.31 m/s^2; x_1 = 13.9m

5.   a.) v_a = 25 km/s, v_b = 8.0 km/s, v_c = -5.6 km/s

     b.) v_{max} = 25 km/s

     c.) no accelerations are shown

     d.) a_{ave} = 7.6 km/s^s

e.)

6.   a.) a = 2.1 m/s^2
     b.) m_2 = 330 g