[C]

(a) zero; because the x-velocity is constant

(b) 3.07 m/s

(c) -9.8 m/s/s

(d) Fnety = m\*ay and is in the -y direction

[B]

(a) v = (3.07, 4.52) m/s. The initial y-velocity is the intercept on the vy vs. t graph

(b) r = (0.52, 2.66) m. This is the first data point for (x,y)

(c) from y(t), it is t=0.47 s where y is a max; from vy(t), it is t=0.47, where vy=0.

(d) v = (3.07,0) m/s

[A]

(a) at t=0.25, r=(1.2875, 3.4225, 0) m, and v= (3.07, 2.07, 0) m/s

(b) at t=0.25, r ~ (1.3,3.5) m and v ~ (3.05, 2.0) m/s. To one decimal place, these values are within 0.1 of the measured values.

(c) vy=0 between t=0.5 and t=0.55 s. The peak occurs at 0.47 s according to the data. The prediction and the actual time are off by about one time step.