Ch.4 solutions to even recommended problems

14. $\vec{F} = (16.3\hat{i} + 14.6\hat{j})$

4.

a) $v_x = -45$ m/s, $v_y = 15$ m/s

b) $18.4^0$ above the negative x axis

c) $\Delta x = -225m, \Delta y = 75m$

d) $(-227, 79)$

8.

a) $1.32^o$ below the negative x axis

b) 11.2 kg

c) 37.5 m/s

d) $a_x = 3.75$ m/s$^2$, $a_y = 0.089$ m/s$^2$

22)

a) $49.0N$

b) $98.0N$

c) $24.5N$

24)

a) $T_1 = 31.5$ N, $T_2 = 37.5$ N, $T_3 = 49.0$ N

b) $T_1 = 113$ N, $T_2 = 56.6$ N

28) $a = 6.30$ m/s$^2$ , $T = 31.5$ N

30) $a = 3.57$ m/s$^2$ ($m_1$ goes up and $m_2$ goes down), $T = 12.1$ N

Ch.5 solutions to even recommended problems

2)

a) $\Delta x = 256$ m

b) $\Delta x = 42.7$ m

8)

a) $\theta = 55.1^o$

b) $N = 167$ N

10) $T = 37.8$ N

12)

a) $a = 2.31$ m/s$^2$

b) $T_1 = 30$ N, $T_2 = 24.2$ N