

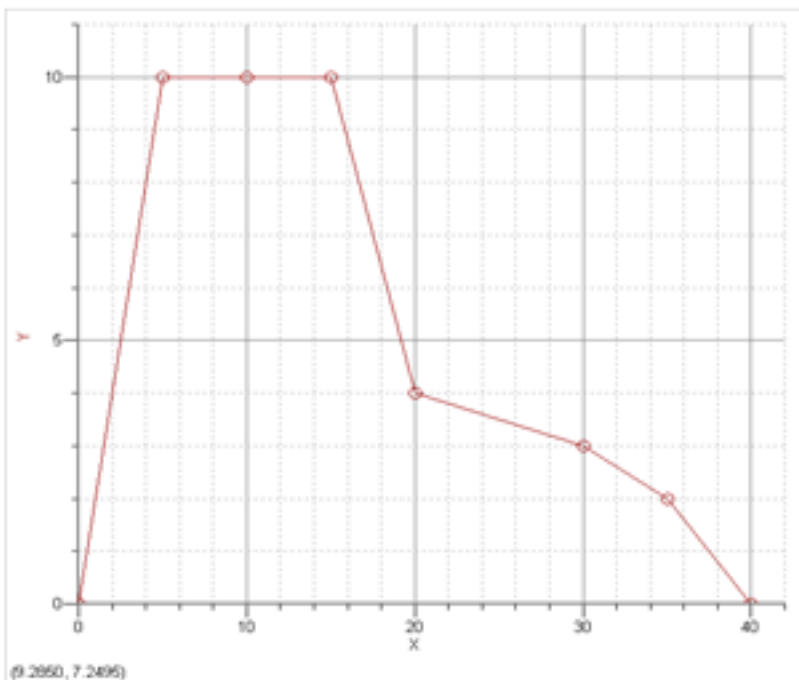
p. 61

#3

a) 5 to 15 seconds

b) 0 to 5 seconds

c) 15 to 20 seconds



P. 64 #'s 6 - 9

6. 8 m/s/s

7. -7 m/s/s

8. 3 m/s/s

9. a) -8.3 m/s/s

b) -4.2 m/s/s

$$a = \frac{4.5 - -3}{2.5}$$

$$a = 3 \text{ m/s}^2$$

$$7.) v_i = 36 \frac{\text{m}}{\text{s}}$$

$$v_f = 15 \frac{\text{m}}{\text{s}}$$

$$t = 3 \text{ s}$$

$$a = \frac{v_f - v_i}{t}$$

$$a = \frac{15 - 36}{3}$$

$$\frac{-21}{3} = -7 \frac{\text{m}}{\text{s}^2}$$

$$8.) v_i = 3 \frac{\text{m}}{\text{s}}$$

$$v_f = 4.5 \frac{\text{m}}{\text{s}}$$

$$t = 2.5 \text{ s}$$



p. 69 #'s 26 - 29

26. 8.8 s

27. 360 m

28. 6.2 s

29. OMIT

$$\begin{cases} v_i = 15 \frac{\text{m}}{\text{s}} \\ v_f = 25 \frac{\text{m}}{\text{s}} \end{cases}$$

$$\begin{cases} d = 125 \text{ m} \\ a = \frac{v_f^2 - v_i^2}{2d} \\ t = ? \end{cases}$$

$$a = \frac{v_f - v_i}{t}$$

$$t = \frac{v_f - v_i}{a} = \frac{25 - 15}{1.6}$$

$$\underline{t = 6.2 \text{ s}}$$

v_f

$$v_f^2 = v_i^2 + 2ad$$

$$= \frac{v_f^2 - v_i^2}{2d}$$

$$a = 1.6 \frac{\text{m}}{\text{s}^2}$$

P. 70 # 30 - 32

30. 4300 m

31. 27 m

32. 1160 m

$$30.) v = 4.5 \frac{\text{m}}{\text{s}}$$

$$t = 15 \text{ min} = 900 \text{ s}$$

$$v = \frac{d}{t}$$

$$d = v \cdot t = 4.5(900)$$

$$d = \underline{4050 \text{ m}}$$

$$a = .05 \text{ m/s}^2$$

$$v_f = 0$$

$$t = 90 \text{ s}$$

$$d = ?$$

$$v_i = 4.5 \frac{\text{m}}{\text{s}}$$

$$\Delta d = 4.5(90) + \frac{1}{2}(.05)(90)^2$$

$$d = \underline{202.5}$$

$$4252.5$$

$$\underline{4.3 \times 10^3 \text{ m}}$$

$$31.) a = .5 \frac{m}{s^2}$$

$$t = 6 s$$

$$v = 3 \frac{m}{s}$$

$$t = 6 s$$

$$v_i = 0$$

$$d = v_i t + \frac{1}{2} a t^2$$

$$\frac{1}{2} (.5) (6)^2 = 9$$

$$v = \frac{d}{t}$$

$$d = v \cdot t$$
$$= 3(6) = 18$$

27

$$32.) \quad d =$$

$$v_i = 0$$

$$a = 2 \frac{m}{s^2}$$

$$v_f = 18 \frac{m}{s}$$

$$v = 18 \frac{m}{s}$$

$$d =$$

$$t = 60 s$$

$$\underline{d = 1161 m}$$

$$v_f^2 = v_i^2 + 2ad$$

$$d = \frac{v_f^2 - v_i^2}{2a} = \frac{18^2}{2(2)}$$

$$\underline{d = 81 m}$$

$$v = \frac{d}{t}$$

$$d = vt = 18(60)$$

$$\underline{d = 1080 m}$$