

57

$$1.25 \text{ m/s}^2$$

Slope is Acceleration

$$\Rightarrow \frac{\Delta v}{\Delta t} = \frac{10 \text{ m/s}}{8 \text{ s}}$$

58-59

From 4 sec to 8 sec

$$v_i = 5 \text{ m/s}$$

$$v_f = 10 \text{ m/s}$$

$$a = 1.25 \text{ m/s}^2$$

$$d = ?$$

$$t = 4 \text{ s}$$

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

$$= (5 \text{ m/s})(4 \text{ s}) + \frac{1}{2} (1.25 \text{ m/s}^2)(4 \text{ s})^2$$

$$= 20 \text{ m} + 10 \text{ m}$$

$$= 30 \text{ m}$$

60

$$15 \text{ } \Omega$$

$$R_{eq} = \frac{V}{I} = \frac{30 \text{ V}}{2 \text{ A}} = 15 \frac{\text{V}}{\text{A}}$$

61-62

$$\frac{1}{R_{eq}} = \frac{1}{R_1} + \frac{1}{R_2}$$

$$\frac{1}{15} = \frac{1}{20} + \frac{1}{R_2}$$

$$\frac{1}{15} - \frac{1}{20} = \frac{1}{R_2}$$

$$= R_2 = \frac{1}{\frac{1}{15} - \frac{1}{20}}$$

$$= 60 \text{ } \Omega$$