

$$c) v = 40 - at$$

(5)

$$0 = 40 - 4t \Rightarrow t = 10$$

$$s = 40t - \frac{1}{2}at^2$$

$$= 40 \times 10 - \frac{1}{2} \times 4 \times 10^2 = 200 < 500$$

\therefore Train never gets to station.