

Car A: $d = \text{area on } V-T \text{ graph}$

$$d_{0-10} = l \cdot w \text{ (rectangle)}$$

$$= (25 \text{ m/s})(10 \text{ sec})$$

$$d_{0-10} = 250 \text{ m}$$

Car B: $d = \text{area on } V-T \text{ graph}$

$$d_{0-10} = d_{0-6} + d_{6-10}$$

(triangle) + (rectangle)

$$= \frac{1}{2} \cdot (30 \text{ m/s})(6 \text{ sec}) + (30 \text{ m/s})(4 \text{ sec})$$

$$d_{0-10} = 210 \text{ m}$$