



$$A_1 = \frac{h(a+b)}{2} = \frac{(20)(5+10)}{2} = \underline{\underline{150\text{ m}}}$$

$$A_2 = \frac{(10)(20+40)}{2} = \underline{\underline{300\text{ m}}}$$

$$A_3 = \frac{1}{2} b \times h = \frac{1}{2} (4)(40) = \underline{\underline{80\text{ m}}}$$

$$A_4 = \frac{1}{2} (6)(60) = \underline{\underline{180\text{ m}}}$$

$$\begin{aligned} \text{Distance} &= A_1 + A_2 + A_3 + A_4 \\ &= 150 + 300 + 80 + 180 \\ &= \underline{\underline{710\text{ m}}} \end{aligned}$$

$$\begin{aligned} \text{Displacement} &= (A_1 + A_2 + A_3) - A_4 \\ &= 150 + 300 + 80 - 180 \\ &= \underline{\underline{350\text{ m}}} \end{aligned}$$

$$v_{sp} = \frac{\text{dist}}{\text{time}} = \frac{710\text{ m}}{30\text{ s}} = \underline{\underline{24\text{ m/s}}}$$

$$v_{avg} = \frac{\text{disp}}{\text{time}} = \frac{350}{30} = \underline{\underline{+12\text{ m/s}}}$$