

(10)

Middlemost flag

13 flags... \cdot $2m$ \cdot $2m$ \cdot $2m$ \odot $2m$ \cdot $2m$ \cdot $2m$ \cdot ... 13 flags

distance covered to fix first flags on both sides = $2 \times 2 + 2 \times 2$
 $= 8m$

distance covered to fix second flags on both sides = $4 \times 2 + 4 \times 2$
 $= 16m$

distance covered to fix third flags on both sides = $6 \times 2 + 6 \times 2$
 $= 24m$

\therefore distances covered are

$$8m, 16m, 24m, \dots (13)$$

$$a = 8, d = 16 - 8, n = 13$$

$$= 8$$

$$\begin{aligned} \text{total distance covered} &= S_{13} \\ &= \frac{13}{2} [2 \times 8 + 12 \times 8] \\ &= \frac{13 \times 2}{2} (8 + 48) \\ &= 13 \times 56 \\ &= 728m \end{aligned}$$

Maximum distance covered for a flag
 $= 13 \times 2$
 $= 26m$