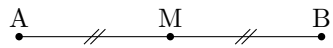


8.19



$\dot{O}$

$$\begin{aligned}\overrightarrow{OM} &= \overrightarrow{OA} + \overrightarrow{AM} \\ &= \overrightarrow{OA} + \frac{1}{2} \overrightarrow{AB} \\ &= \overrightarrow{OA} + \frac{1}{2} (\overrightarrow{OB} - \overrightarrow{OA}) \\ &= \overrightarrow{OA} + \frac{1}{2} \overrightarrow{OB} - \frac{1}{2} \overrightarrow{OA} \\ &= \frac{1}{2} \overrightarrow{OA} + \frac{1}{2} \overrightarrow{OB} \\ &= \frac{1}{2} (\overrightarrow{OA} + \overrightarrow{OB})\end{aligned}$$