

$$\begin{aligned}
\mathbf{E} \left[ X \right] &= \mathbf{E} \left[ \sum_{i=1}^n X_i \right] \\
&= \sum_{i=1}^n \mathbf{E} \left[ X_i \right] \\
&= \sum_{i=1}^n 1/2 \\
&= n/2 .
\end{aligned}$$