1. To use the Markov inequality, let $X = \sum_{i=1}^{10} X_i$. Then,

$$\mathbf{E}[X] = 10\mathbf{E}[X_i] = 5,$$

and the Markov inequality yields

$$\mathbf{P}(X \geq 7) \leq \frac{5}{7} = 0.7142.$$

2. Using the Chebyshev inequality, we find that

$$\begin{aligned}
2\mathbf{P}(X - 5 \geq 2) &= \mathbf{P}(|X - 5| \geq 2) \\
&\leq \frac{\mathrm{var}(X)}{4} = \frac{10/12}{4} \\
\mathbf{P}(X - 5 \geq 2) &\leq \frac{5}{48} = 0.1042.
\end{aligned}$$

3. Finally, using the Central Limit Theorem, we find that

$$\begin{aligned}
\mathbf{P}\left(\sum_{i=1}^{10} X_i \geq 7\right) &= 1 - \mathbf{P}\left(\sum_{i=1}^{10} X_i \leq 7\right) \\
&= 1 - \mathbf{P}\left(\frac{\sum_{i=1}^{10} X_i - 5}{\sqrt{10/12}} \leq \frac{7-5}{\sqrt{10/12}}\right) \\
&\approx 1 - \Phi(2.19) \\
&\approx 0.0143.
\end{aligned}$$