1. False. The random variables have to be iid.

2. False, the random variables have to be independent in general. In contrast, remember $E(X_1+X_2) = E(X_1)+E(X_2)$ is always true regardless of whether they are independent.

3. (a) Both X_1 and X_2 have the same pmf:

$$
\begin{array}{c|c|c}
x & 0 & 1 \\
\hline
f(x) & \frac{1}{2} & \frac{1}{2}
\end{array}
$$

   Thus they are identically distributed. Since they are independent (stated in the problem), these random variables are iid.

   (b) $E(X_1 + X_2) = E(X_1) + E(X_2)$, and this is always true for any random variables. $E(X_1) = E(X_2) = 0 * \frac{1}{2} + 1 * \frac{1}{2} = \frac{1}{2}$. Thus $E(X_1 + X_2) = 1$.

   (c) It doesn't really make sense, because the number of random variables ($n = 2$) is too small to draw meaningful conclusions using the central limit theorem.