1. True. This is always true. Remember that if X_1, X_2 are not independent, then we may not have $E(X_1X_2) = E(X_1)E(X_2)$, but the given statement is always true.

2. True.

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

x	1	2	3
$f(x)$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$

    Since X_1, X_2 are independent, they are iid.

    (b) Since X_1, X_2 are independent, we know $E(X_1X_2) = E(X_1)E(X_2)$. We compute $E(X_1) = E(X_2) = 1 * \frac{1}{3} + 2 * \frac{1}{3} + 3 * \frac{1}{3} = 2$. Then $E(X_1X_2) = 4$.

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