2 The random variable X has the distribution $B\left(8, \frac{3}{4}\right)$. A random sample of 100 values of X is chosen, and the sample mean, $\overline{X}$, is found.

(a) Find $P(\overline{X} > 6.2)$. You are **not** expected to use a continuity correction. [6]

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(b) State why the Central Limit Theorem was needed in the calculation in part **(a)**. [1]

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