**3F Approximating from the Binomial Distribution**

1. A biased coin has . The coin is tossed 100 times and the number of heads, X, is recorded.
2. Write down a binomial model for
3. Explain why can be approximated using a normal distribution
4. Find the values of and in this approximation
5. The binomial random variable is approximated by the normal random variable .
6. Use this approximation to find
7. Also use the approximation to find
8. For a particular type of flower bulb, 55% will produce yellow flowers. A random sample of 80 bulbs is planted.

Calculate the percentage error incurred when using a normal approximation to estimate the probability that there are exactly 50 yellow flowers.