Page 257. Warning, to get your answers, correct to 2 places, you must calculate your std. devs. to 4 places. Recommendation: use your calculator's variables to store intermediate answers. Reminder: you get extra credit for finding errors in the lecture notes, homework sheets and recommended problem sheets.

7.30. Random samples of size \( n = 500 \) are selected from a binomial population with \( p = .1 \).

\[
\sigma_{\hat{p}} = \quad \_ \_ \_ \_
\]

(a) Is the normal distribution an appropriate approximation for the sampling distribution of \( \hat{p} \)?

yes? no?

(b) \( P(\hat{p} > .12) = \quad \_ \_ \_ \_ \_ \)

(c) \( P(.76 < \hat{p} < .84) = \quad \_ \_ \_ \_ \_ \)

7.32. In a binomial population with \( p = .8 \) and \( n = 400 \).

\[
\sigma_{\hat{p}} = \quad \_ \_ \_
\]

(a) Is the normal distribution an appropriate approximation for the sampling distribution of \( \hat{p} \)?

yes? no?

(b) What is the probability that the sample percentage exceeds 80%?

\( \mu_{\hat{p}} = \quad \_ \_ \_ \_ \_ \)

\( \sigma_{\hat{p}} = \quad \_ \_ \_ \_ \_ \)

7.36'. Intel made 76% of the microprocessors shipped in PCs in 1996. In order to verify this percentage, a random sample of 1000 PCs are classified according to whether or not their processor is made by Intel.

\( \mu_{\hat{p}} = \quad \_ \_ \_ \_ \_ \)

\( \sigma_{\hat{p}} = \quad \_ \_ \_ \_ \_ \)

(b) What is the probability that the sample percentage exceeds 80%?

\( \_ \_ \_ \_ \_ \)

(c) What is the probability that the sample percentage is between 75% and 80%?

\( \_ \_ \_ \_ \_ \)

\( \_ \_ \_ \_ \_ \)

\( \_ \_ \_ \_ \_ \)