Name:_____ Math 130
Date: 4/1/2025   Quiz 10

Formulas you may need: $\mu_{\bar{X}} = \mu_X$ $\sigma_{\bar{X}} = \dfrac{\sigma_X}{\sqrt{n}}$ $\mu_{\hat{p}} = p$ $\sigma_{\hat{p}} = \sqrt{\dfrac{pq}{n}}$

1. (2 points) State the central limit theorem (for $\overline{X}$).

2. (4 points) 8.3% of all people have asthma. In a group of 300 people, what is the probability that between 10% and 12% of them will have asthma?

3. (4 points) The average time all people in the world spend on the internet per day is 402 min with a standard deviation of 53 min. If 145 people are randomly selected, what is the probability that they spend an average time of more than 395 minutes on the internet in a day?