

Name: _____

In each part, calculate a confidence interval for the parameter with a box around it.

1. $\boxed{\mu}$, $\bar{x} = 14$, $s = 4$, $n = 12$, $\alpha = .05$ (**11.93, 16.07**)

2. \boxed{p} , $\hat{p} = .23$, $n = 10$, $\alpha = .10$

3. \boxed{p} , $\hat{p} = .23$, $n = 150$, $\alpha = .10$ (**0.1735, .2865**)

4. $\boxed{\mu}$, $\bar{x} = 52$, $s = 10$, $n = 150$, $\alpha = .08$ (**50.56, 53.44**)

For the following, determine the probability with a box around it and draw any relevant graphs:

5. $\boxed{\bar{x} < 13.5}$, $\mu = 14, \sigma = 4, n = 12$ **0.33**

6. $\boxed{\hat{p} > .24}$, $p = .23, n = 150$ **0.387**

7. $\boxed{50 \geq \bar{x} \leq 52}$, $\mu = 51, s = 10, n = 150$ **0.777**