STAT 110A
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Name:_____

Take-home Quiz 5

• **Cheese Problem.** The amount of moisture content (in pounds) in a 25-pound wheel of cheese is distributed as a normal $N(9, (0.9)^2)$ random variable. What is the probability that in a randomly chosen wheel the amount of moisture:

1. Exceeds 10.25 pounds;
2. Is between 8.15 and 10 pounds?
3. Differs from the mean by no more than 1.8 pounds?
4. Find the number x_0, so that the amount of moisture 96.5% of the wheels exceeds x_0.
5. In what bounds (about the mean) the amount of moisture falls with the probability 0.95?
6. If the amount of moisture is $N(9, \sigma^2)$, find σ so that

$$P(8 \leq X \leq 10) = 0.64.$$

Use MINITAB for 1,2, and 4 and submit the printout(s).