Assignment #10: Continuous Distributions   Name: _____

Situation: You go fishing one day at a lake where:
- the lengths of fish follow a normal distribution with a mean of 15 & a standard deviation of 3.5 inches
- you are allowed a creel limit of 4 (the number of fish you are allowed to keep) within…
- a slot limit (the length of the fish you are allowed to keep) between 12-18 inches
- you will release any fish you catch back into the lake (sampling without replacement)

1. In the decades that you have been fishing, you notice that you seem to catch a fish every 30 minutes. What is the probability that you go more than 60 minutes without catching a fish?

Distribution used: _____   Answer: _____

2. What's the probability that you will catch your first fish in less than 10 minutes?

Distribution used: _____   Answer: _____

3. What's the probability that you will catch your first fish in between 20 and 40 minutes?

Distribution used: _____   Answer: _____

4. Suppose you catch one fish. What's the probability that the fish is within the slot limit?

Distribution used: _____   Answer: _____

5. What is the probability you will catch 2 or fewer fish before catching one within the slot limit? (Use answer from #4)

Distribution used: _____   Answer: _____

6. If you catch four fish, what's the probability that all four fish are within the slot limits? (Use answer from #4)

Distribution used: _____   Answer: _____

7. What is the probability of catching your fourth trout of the appropriate size on your seventh fish?

Distribution used: _____   Answer: _____

8. How many fish do you expect to catch before you reach the creel limit of four trout of the desired length?

Distribution used: _____   Answer: _____