Test Your Knowledge- Poisson Probability Distribution

Name_____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Use the Poisson Distribution to find the indicated probability.

1) If the random variable x has a Poisson Distribution with mean $\mu = 4$, find the probability that x = 7.

1) _____

2) If the random variable x has a Poisson Distribution with mean $\mu = 0.446$, find the probability that x = 0.

2) _____

3) The Columbia Power Company experiences power failures with a mean of $\mu = 0.210$ per day. Find the probability that there are exactly two power failures in a particular day.

3) _____

4) A computer salesman averages 1.5 sales per week. Use the Poisson distribution to find the probability that in a randomly selected week the number of computers sold is 2.

4) _____

5) A naturalist leads whale watch trips every morning in March. The number of whales seen has a Poisson distribution with a mean of 2.2. Find the probability that on a randomly selected trip, the number of whales seen is 5.

5) _____

6) The number of lightning strikes in a year at the top of a particular mountain has a Poisson distribution with a mean of 3.1. Find the probability that in a randomly selected year, the number of lightning strikes is 5.

6) _____

7) For a certain type of fabric, the average number of defects in each square foot of fabric is 0.8. Find the probability that a randomly selected square foot of the fabric will contain more than one defect.

7) _____

8) A mountain search and rescue team receives an average of $\mu = 0.73$ calls per day. Find the probability that on a randomly selected day, they will receive fewer than two calls.

8) _____

9) The number of calls received by a car towing service averages 21.6 per day (per 24-hour period). After finding the mean number of calls per hour, find the probability that in a randomly selected hour the number of calls is 1.

9) _____

1) 0.05954
2) 0.64018
3) 0.018
4) 0.2510
5) 0.0476
6) 0.1075
7) 0.1912
8) 0.8337
9) 0.36591