

# Poisson Probability Distribution

## Computer Sales

A computer salesman averages 1.8 sales per week (7-days). In the next week, what's the probability the computer salesman will have:

**Approximate your answers to the nearest thousandths.**

1. No Sales?
2. One sale?
3. At least one sale?
4. No more than one sale?
5. More than one sale?
6. In the next day, what's the probability there will be two sales?
7. In the next 3-day interval, what's the probability there will be more than two sales?

## 911 Calls

Emergency service experiences a mean of 4.2 calls per day (24 hours). In the next day, what's the probability there will be:

**Approximate your answers to the nearest thousandths.**

8. No calls?
9. Two calls?
10. More than two calls?
11. At least one call?
12. Between one and four calls?
13. In the next, hour what's the probability there will be more than three calls?
14. In the next two days (48-hour time interval), what's the probability there will be less than three calls?

## Lightning Strikes

The number of lightning strikes on ELAC Mountain occurs at a mean rate of 3.6 per year (365-days). In the next year, what's the probability there will be:

**Approximate your answers to the nearest thousandths.**

15. Four lightning strikes?
16. More than three lightning strikes?
17. At least two lightning strikes?
18. Less than two lightning strikes?
19. No more than one lightning strikes?
20. In the next 90 days, what's the probability there will be at least one lightning strike?
21. In the next, 30 days, what's the probability there will be a lightning strike?

### **Murders**

St Vegas experiences an average of 12.5 murders per month (30-day interval). In the next month, what's the probability there will be:

**Approximate your answers to the nearest thousandths.**

22. No murders?
23. Ten murders?
24. More than five murders?
25. No more than three murders?
26. Less than six murders?
27. In the next week (7-day interval), what's the probability there will be two murders?
28. In the next year (365 days), what's the probability there will be at least two murders?

### **Earthquakes**

California experiences 1 Big One (earthquake above 6.0 on the Southern section of the San Andreas Fault) every 500 years. In the next year) what's the probability there will be:

**Approximate your answers to the nearest thousandths.**

29. A big one?
30. At least one big one?
31. More than one big one?
32. Two big ones?
33. No more than two big ones?
34. In the next decade (10 years), what's the probability there will be a big one?
35. In the next century (100-years), what's the probability there will be more than two big ones?