Near the end of World War II, Germany developed the V-1 flying bomb, an early cruise missile. Over a period of 9 months, **537** V-1 bombs fell in South London, over an area of **144km^2**. The British authorities noticed that the bombs sometimes fell in "clusters," but they did not know whether this was the result of random chance or a precision guidance system.

$144 \cdot 4 = 576$

On average, how many V-1s fell in any area of **.25km^2**?

$\lambda = \frac{537}{576} \approx .932$

Imagine that we divide South London into $4 \cdot 144 = 576$ squares of area **.25km^2** each. If the number of V-1s in a given square of area **.25km^2** followed a Poisson distribution, how many of the squares would we expect to have exactly k hits from a V-1?

$576 \cdot e^{-.93} \cdot \frac{(.93)^k}{k!}$

k	expected # squares	observed #
0	226.74	229
1	211.39	211
2	98.54	93
3	30.62	35
4	7.14	7