

Answer on Question #75931 – Math – Statistics and Probability

Question

If three persons, on an average, come to a company for job interview per day, then determine the probability that less than three people have come for an interview on a given day.

Solution

To answer the given question, one needs to use Poisson distribution.

$$P(k < 3) = P(0) + P(1) + P(2);$$

$$P(k) = e^{-\lambda} \frac{\lambda^k}{k!};$$

$$P(0) = e^{-3} \frac{3^0}{0!} = 0.050;$$

$$P(1) = e^{-3} \frac{3^1}{1!} = 0.149;$$

$$P(2) = e^{-3} \frac{3^2}{2!} = 0.224;$$

$$P(k < 3) = P(0) + P(1) + P(2) = 0.050 + 0.149 + 0.224 = 0.423.$$

Answer: 0.423.