

Answer on Question #72713 – Math – Statistics and Probability

Question

The probability that a person will die when he or she contracts a virus infection is 0.001. Of the next 4000 people infected, what is the mean number who will die?

Solution

Let X give the number who will die of the infected people. The random variable X follows the binomial distribution with $n = 4000$ and $p = 0.001$. The expected value of X , that is the mean number who will die, is

$$E[X] = np = 4000 \cdot 0.001 = 4.$$

Answer: 4.