

Answer on question 9825 – Math – Probability

Software filters rely heavily on “blacklists” (lists of known “phishing” URLs) to detect fraudulent e-mails. But such filters typically catch only 20 percent of phishing URLs. Jason receives 16 phishing e-mails.

What is the expected number that would be caught by such a filter?

Solution

The expected number of phishing URLs is equal to mathematical expectation. In this case we have binomial distribution with 16 trials and probability of success is 0.2. Therefore, the expected number is $16 \times 0.2 = 3.2 \approx 3$.

Answer: (a) 3;