Answer on Question #59007 – Math – Statistics and Probability

Question

When a customer places an order with Rudy's Online Office Supplies, a computerized accounting information system (AIS) automatically checks to see if the customer has exceeded his or her credit limit. Past records indicate that the probability of customers exceeding their credit limit is 0.05. Suppose that, on a given day, 20 customers place orders. Assume that the number of customers that the AIS detects as having exceeded their credit limit is distributed as a binomial random variable

What's the probability that zero customers will exceed their limits?

Solution:

$$P = (1 - 0.05)^{20} \approx 0.3585.$$