

Answer on Question #76841 – Math – Statistics and Probability

Question

The mean value of land and buildings per acre from a sample of farms is \$1800, with a standard deviation of \$300. The data set has a bell-shaped distribution. Assume the number of farms in the sample is 78.

(a) Use the empirical rule to estimate the number of farms whose land and building values per acre are between \$1200 and \$2400.

Solution

$$P(1200 < X < 2400) = P(\mu - 2\sigma < X < \mu + 2\sigma) = 0.68.$$

$$N = 78 \cdot 0.68 \approx 53.$$