Answer on Question #39965, Math, Statistics and Probability

Question:

Mean value of land from a sample is $1800 with standard deviation of $200 with bell shaped distribution. Using Empirical determine which of the farms are more than two standard deviations from the mean.

$2142,$2383,$1462,$1061,$1651,$1891

Answer:

We have mean $\mu = 1800$ and standard deviation $\sigma = 200$. Two standard deviations from mean equals:

$$\mu \pm 2\sigma = 1800 \pm 2 \cdot 200$$

$$\mu + 2\sigma = 1800 + 2 \cdot 200 = 2200$$

$$\mu - 2\sigma = 1800 - 2 \cdot 200 = 1400$$

Therefore we need values > 2200 or < 1400:

$$2383 > 2200$$

$$1061 < 1400$$

Answer: $2383, $1061