

Problem 37

If doctors' salaries in some country are normally distributed with a mean of \$200,000 per year, and the cut-off salary for the bottom 15% of the population is \$120,000; What is the 85th percentile?

Answer

\$280,000

Explanation

Since the normal distribution is symmetric, z-score of the cut-off value for the lower 15% is the negative of the z-score of the cut-off value for the upper 15%. That is to say, the 85th percentile is same number of deviations above the mean as \$120,000 is below \$200,000. Thus the answer is \$280,000.