Exercise Problems on Normal Distribution, Sampling Distribution of Mean & Confidence Interval Estimation

Name:_____

Question: Healthy Chinese adults' brain weights follow a normal distribution with a mean of 2 lb and a standard deviation of .4 lb.

1) If Dr. Chang's brain weight is 2.1 lb. What is the percentile of his weight in the distribution?

2) What is the 80th percentile in this distribution?

3) If a random sample of 100 Chinese brain weights data is collected, what is the probability that the average brain weight from this sample is higher than 2.1 lbs?

4) In a study of healthy Russian adults, brain weight data from a random sample of 80 healthy adults was collected. The sample mean was 2.1 lb with a sample standard deviation of .3 lb. Find the 90% confidence interval estimate for mean brain weight of healthy Russian adults.