

1. A forest products company claims that the amount of usable lumber in its harvested trees averages 172 cubic feet and has a standard deviation of 12 cubic feet. Assume that these amounts have approximately a normal distribution.
 - a. What percentage of trees contains more than 160 cubic feet?

 - b. What percentage of trees contain between 172 and 196 cubic feet?

2. At two years of age, sardines inhabiting Japanese waters have a length distribution that is approximately normal with a mean of 20.20 cm and standard deviation of 0.65 cm.
 - a. What percentage of these sardines is between 19.55 and 21.5 cm long?

 - b. How long are the longest 16% of all these sardines?

 - c. How short are the shortest 16% of all these sardines?

3. The mean cholesterol level in children is 175 mg/dL with standard deviation 35 mg/dL. Assume this level varies from child to child according to an approximate normal distribution.
 - a. What percentage of children has a cholesterol level above 210 mg/dL?

 - b. How high are the levels for the highest 2.5% of all children?

4. Porphyrin is a pigment in blood protoplasm and other body fluids that is significant in body energy and storage. In healthy Alaskan brown bears, the amount of porphyrin in the bloodstream (in mg/dL) has approximate normal distribution with mean 47.5 and standard deviation 12.2.
- What percentage of these bears have between 23.1 and 71.9 mg/dL porphyrin in their bloodstream?

 - How low are the porphyrin levels for the lowest 2.5% of all the bears?
5. Healthy 10-week-old domesticated kittens have average weight 24.5 oz. with a standard deviation of 7.25 oz. The distribution is approximately normal.
- A kitten is designated as dangerously underweight when, at 10 weeks, it weighs less than 10.0 oz. Approximately what percentage of healthy kittens will be designated as dangerously underweight?

 - What is the median weight of the kittens?