# Examples on Normal Distribution

# Example 1

Aluminum sheets used to make beverage cans have thicknesses that are normally distributed with mean 10 and standard deviation 1.3.

- What is the probability that a particular sheet has a thickness between 9.8 and 10.5 thousandths of an inch?

- What is the probability that a particular sheet has a thickness above 11.0 thousandths of an inch?

# Example 1, cont.

- What is the probability that a particular sheet has a thickness less than 9.5 thousandths of an inch?

- What is the probability that a particular sheet has a thickness that equals exactly 10.0 thousandths of an inch?

- If the sheet thickness has an accepted tolerance of ±0.6 thousandths of an inch, what is the expected rejection rate?

# Example 1, cont.

- If 90% of the sheets are within tolerance, what are the tolerance limits? (assume that tolerance has the same value for plus and minus).