

RECITATION SAMPLING DISTRIBUTIONS

First:

Collect homework due today.

Handout homework solutions.

Review one or more homework problems, as needed.

Then:

Explain difficult concepts from the lecture and do problems in this set of notes.

Example:

A candy manufacturer produces bags of jelly beans. The weight of a bag of jelly beans is normally distributed with a mean of 12 ounces and a standard deviation of 0.4 ounces.

(a) What is the probability that a randomly selected bag weighs between 11.62 and 12.3 ounces?

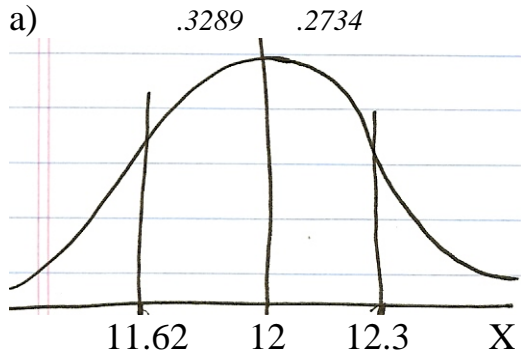
(b) 96% of the bags of jelly beans weigh more than ___ ounces ?

If a random sample of 16 bags of jelly beans is selected ...

(c) what is the probability that the sample mean will be between 11.62 and 12.3 ounces?

Explain the difference between your answer to (a) and (c).

(d) what is the probability that the sample mean will be above 12.2 ounces?

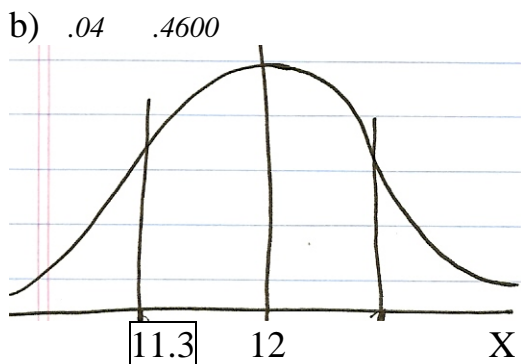


- .95 0 .75 Z

$$Z = (11.62 - 12) / 0.4 = -.38 / .4 = -.95$$

$$Z = (12.3 - 12) / .4 = .3 / .4 = .75$$

$$\text{ANS} = .3289 + .2734 = \boxed{.6023}$$



-1.75 0 Z

$$-1.75 = (X - 12) / .4 \quad X = 11.3$$

