Quiz #2

z-score
How many standard deviations are you away from the mean.
Men's room can be same standard deviation away from the mean & women can have different values.

Statistics vs Parameter
Samples vs Population

\[ \bar{x} = 107.57 \]
\[ s = 13.71 \]

For a particular observation \( x \), its z-score:

\[ z = \frac{x - \mu}{s} \]

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1. Z-score: 0. So it's the same as mean, 107.57.

2. \( z + 16 = 107.57 + 13.71 \).

3. \( z - 16 = 107.57 - 13.71 \).

\[ \mu = 107, \sigma = 13 \], which x has \( z = 1 \)
\[ z = \frac{x - 107}{13} \]
\[ x = 120. \]

Homework: 4, 5, 6, 7