Beginning statistics 1 with the Casio fx-82AU PLUS

Setting your calculator to work with a list of scores
Turn your calculator on and press MODE then 2 to set the calculator to the statistics mode. Press 1 for (1-VAR) to select 1 variable statistics. Now you will see a column for the scores. If you can see another column for frequency press SHIFT SETUP then scroll down to the next screen. Press 3 for 3: STAT and turn the frequency column off by pressing 2 for 2: OFF.

1. Enter each score in the following list into your calculator. Press the = key after each entry. Press AC when you have finished entering the scores.

   12, 17, 16, 9, 11, 12, 14, 16, 11, 10, 8, 14, 9

   a Press SHIFT 1 (for STAT) then 4 (for 4: Var). Press 1 then = to find the number of scores (n). Count the scores to make sure your calculator is giving you the right answer!

   b Press SHIFT 1 then 4 again. Now press 2 then = to find the value of the mean (\( \bar{x} \)). Write the value of the mean correct to 1 decimal place.

   c Press SHIFT 1 then 4 again. This time press 3 then = to find the value of the standard deviation (\( x_\sigma_n \)). Write the value correct to 2 decimal places.

2. Clear the entries in your calculator by pressing MODE 2 before you start this question. Enter the following list of scores into your calculator.

   25, 31, 24, 28, 25, 27, 31, 32, 37, 31, 28, 29, 22, 27, 26, 25, 19, 18

   a Calculate the mean of the scores correct to 1 decimal place.

   b What is the standard deviation correct to 2 decimal places?

3. Calculate the mean (\( \bar{x} \)), standard deviation (\( x_\sigma_n \)) and sample standard deviation (\( x_\sigma_{n-1} \)) for each set of scores. Express each value correct to 2 decimal places.

   a 105, 189, 164, 117, 143, 145, 150, 172, 156, 116, 133

   b 0.6, 0.9, 0.75, 1.23, 0.58, 0.8, 0.77, 1.14, 0.26, 0.45, 0.94, 1.04

   c 36, 31, 45, 48, 29, 28, 17, 19, 21, 22, 38

   d 6.8, 5.9, 4.7, 7.8, 3.9, 4.2, 5.8, 6.6, 7.1, 10.2, 8.3, 6.4

Answers
1a 13  b 12.2  c 2.83  2a 26.9  b 4.54
3a \( \bar{x} = 144.55, \ x_\sigma_n = 24.39, \ x_\sigma_{n-1} = 25.58 \)
3b \( \bar{x} = 0.79, \ x_\sigma_n = 0.27, \ x_\sigma_{n-1} = 0.28 \)
3c \( \bar{x} = 30.36, \ x_\sigma_n = 9.95, \ x_\sigma_{n-1} = 10.43 \)
3d \( \bar{x} = 6.48, \ x_\sigma_n = 1.71, \ x_\sigma_{n-1} = 1.78 \)

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