Measure of Center and Dispersion

Q#1: Consider the following data

$$2, 3, 2, 2, 5, 6, 7, 5, 4, 5, 6, 7, 8, 9, 1, 2, 3, 4, 3, 2, 1, 5, 6, 7$$

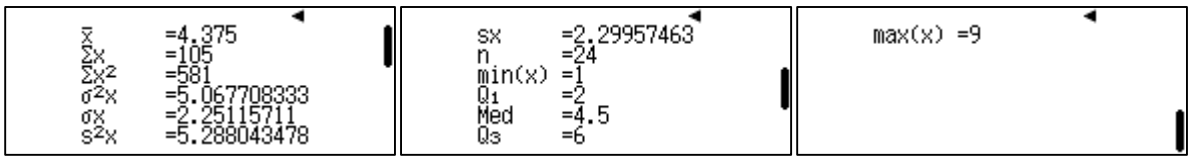
For the data given, find:

1. *arithmetic mean* $(\bar{x})$
2. *sum of all observations* (Σx)
3. *Population variance* (σ^2)
4. *Population Standard Deviation* (σ)
5. *Sample variace* (S^2)
6. *Sample Standard deviation* (S)
7. *lower or First quartile* (Q_1)
8. *Upper or Third Quartile* (Q_3)
9. *Median* $(\tilde{x})$
10. *Minimum Value*
11. *Maximum Value*
12. Coefficient of variation

Solution:

- Press [MENU] and select [6] and then [1].
- Enter your data by entering values and [=] after each value.
- After entering the data, press [OPTN] and select [3]

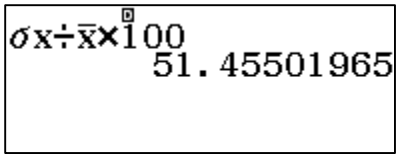
You will have the desired values as follows.



The calculator doesn't give coefficient of variation directly but can be calculated by dividing mean by standard deviation.

Once you have entered the data press [OPTN] and [4]

- Press [OPTN] and scroll down by [▼] and select [2] for variables and [3] to enter the answer of standard deviation on the screen.
- Then press [÷] and repeat the process ([OPTN] [▼] [2]) and select [1] to enter the answer of mean on the screen.
- Finally press [×] [1] [0] [0] [=] to convert decimal into percentage. The answer will be as follows in (percentage).



Note: This option is equally useful for using answers of variables in calculations. You can easily use sums' and variables' answers directly by pressing OPTN ▼