

Statistical Calculations

SD

REG

Standard Deviation

SD

Use the $\boxed{\text{MODE}}$ key to enter the SD Mode when you want to perform statistical calculations using standard deviation.

SD $\boxed{\text{MODE}}$ $\boxed{2}$

- In the SD Mode and REG Mode, the $\boxed{\text{M+}}$ key operates as the $\boxed{\text{DT}}$ key.
- Always start data input with $\boxed{\text{SHIFT}} \boxed{\text{CLR}} \boxed{1} \boxed{=}$ (Scl) $\boxed{=}$ to clear statistical memory.
- Input data using the key sequence shown below.
 $\langle x\text{-data} \rangle \boxed{\text{DT}}$
- Input data is used to calculate values for n , $\sum x$, $\sum x^2$, \bar{x} , σ_n and σ_{n-1} , which you can recall using the key operations noted nearby.

To recall this type of value:	Perform this key operation:
$\sum x^2$	$\boxed{\text{SHIFT}} \boxed{\text{S-SUM}} \boxed{1}$
$\sum x$	$\boxed{\text{SHIFT}} \boxed{\text{S-SUM}} \boxed{2}$
n	$\boxed{\text{SHIFT}} \boxed{\text{S-SUM}} \boxed{3}$
\bar{x}	$\boxed{\text{SHIFT}} \boxed{\text{S-VAR}} \boxed{1}$
σ_n	$\boxed{\text{SHIFT}} \boxed{\text{S-VAR}} \boxed{2}$
σ_{n-1}	$\boxed{\text{SHIFT}} \boxed{\text{S-VAR}} \boxed{3}$

- **Example:** To calculate σ_{n-1} , σ_n , \bar{x} , n , $\sum x$, and $\sum x^2$ for the following data : 55, 54, 51, 55, 53, 53, 54, 52

In the SD Mode:

SHIFT **CLR** **1** (Scl) **=** (Stat clear)

55 **DT**

n= ^{SD} 1.

Each time you press **DT** to register your input, the number of data input up to that point is indicated on the display (n value).

54 **DT** 51 **DT** 55 **DT**

53 **DT** **DT** 54 **DT** 52 **DT**

Sample Standard Deviation (σ_{n-1}) = 1.407885953

SHIFT **S-VAR** **3** **=**

Population Standard Deviation (σ_n) = 1.316956719

SHIFT **S-VAR** **2** **=**

Arithmetic Mean (\bar{x}) = 53.375

SHIFT **S-VAR** **1** **=**

Number of Data (n) = 8

SHIFT **S-SUM** **3** **=**

Sum of Values ($\sum x$) = 427

SHIFT **S-SUM** **2** **=**

Sum of Squares of Values ($\sum x^2$) = 22805

SHIFT **S-SUM** **1** **=**

Data Input Precautions

- **DT DT** inputs the same data twice.
- You can also input multiple entries of the same data using **SHIFT** **;**. To input the data 110 ten times, for example, press 110 **SHIFT** **;** 10 **DT**.