



Use the **ON** key to turn the calculator on, and press **SHIFT AC** (OFF) to power the unit down.

The **MODE** key allows you to choose between Computation, Statistics, or Table Mode. **SHIFT MODE** (SETUP) allows you to make changes to the calculator settings.

To enter a fraction, press **□** and enter your numerator and denominator. The **S \leftrightarrow D** key toggles your calculation results between Standard and Decimal forms.

Press **(-)** to input a negative value or variable.

Press **AC** to clear out anything typed or the entire screen.

The following explains the meaning of each mode on the fx-300ES Plus 2nd Edition:

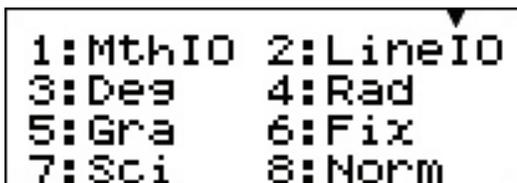


MENU NAME	DESCRIPTION
COMP	This mode performs general calculations.
STAT	This mode performs statistical and regression calculations.
TABLE	This mode generates a numerical table based on one or two functions.

To calculate and solve basic expressions, press **MODE** **1** to enter COMP mode.



To make any changes to the calculator settings, press **SHIFT** **MODE** (SETUP).



Inputting a Fraction & Converting to Decimal Form:

1. To solve $\frac{7}{8} + 2\frac{3}{11}$, press

$\left[\frac{\square}{\square}\right]$ $\left[\frac{7}{\square}\right]$ $\left[\frac{\square}{\square}\right]$ $\left[\frac{8}{\square}\right]$ $\left[\frac{\square}{\square}\right]$ $\left[\frac{+}{\square}\right]$ $\left[\frac{\square}{\square}\right]$ $\left[\frac{SHIFT}{\square}\right]$ $\left[\frac{\square}{\square}\right]$ $\left[\frac{2}{\square}\right]$ $\left[\frac{\square}{\square}\right]$ $\left[\frac{3}{\square}\right]$ $\left[\frac{\square}{\square}\right]$ $\left[\frac{1}{\square}\right]$ $\left[\frac{1}{\square}\right]$ $\left[\frac{=}{\square}\right]$.

Calculator screen showing the fraction $\frac{7}{8} + 2\frac{3}{11}$ and the result $\frac{277}{88}$.

2. To view the solution as a decimal, press $\left[\frac{S+D}{\square}\right]$.

Note: press $\left[\frac{S+D}{\square}\right]$ again to see the entire decimal answer. Pressing once more will display the fraction solution again.

Calculator screen showing the fraction $\frac{7}{8} + 2\frac{3}{11}$ and the decimal result 3.14772 .

Calculator screen showing the fraction $\frac{7}{8} + 2\frac{3}{11}$ and the full decimal result 3.147727273 .

To Find the Remainder of a Division Problem:

1. To find the remainder of 7 divided by 5, press

$\left[\frac{7}{\square}\right]$ $\left[\frac{SHIFT}{\square}\right]$ $\left[\frac{Abs}{\square}\right]$ $\left[\frac{5}{\square}\right]$ $\left[\frac{=}{\square}\right]$.

Calculator screen showing $7 \div 5$ and the result $1, R=2$.

Absolute Value:

1. To find the absolute value of -4, press

$\left[\frac{Abs}{\square}\right]$ $\left[\frac{(-)}{\square}\right]$ $\left[\frac{4}{\square}\right]$ $\left[\frac{=}{\square}\right]$.

Calculator screen showing $|-4|$ and the result 4 .

Exponents:

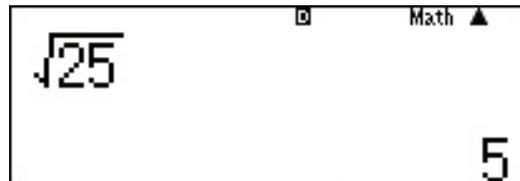
1. To evaluate 3^4 , press $\left[\frac{3}{\square}\right]$ $\left[\frac{x^{\square}}{\square}\right]$ $\left[\frac{4}{\square}\right]$ $\left[\frac{=}{\square}\right]$.

Calculator screen showing 3^4 and the result 81 .

Roots:

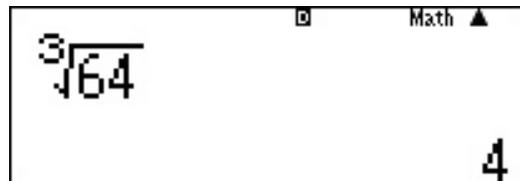
1. To calculate the square root of 25, press

$\sqrt{\square}$ 2 5 \square .



2. To calculate the cube root of 64, press

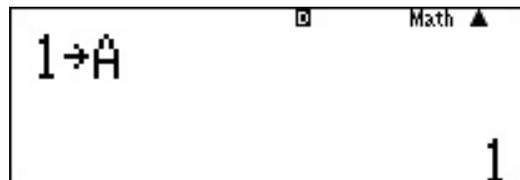
\square x^{\square} 3 \square 6 4 \square .



Storing Variables:

To store a value for any variable, press \square \square followed by a variable, A – F. In this example, we will store a value of 1 for the variable A.

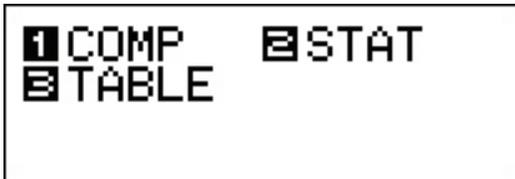
1. Press \square \square \square \square .



STAT MODE

To start a statistical calculation, press **MODE** **2** to enter STAT mode and use the screen that appears to select the type of calculation you want to perform.

*Note: When you want to change the calculation type after entering STAT mode, press **SHIFT** **1** (**STAT/DIST**) **1** (**Type**) to display the calculation type selection screen.*

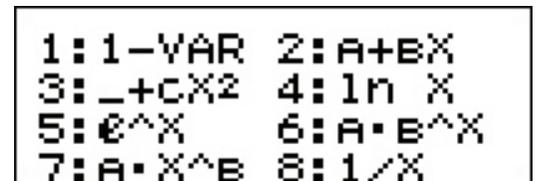


Enter the data points and find the linear regression formula.

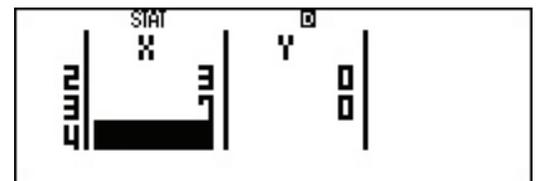
(2, 5) (3, 8) (7, 20)

Entering Data:

1. From the initial Stat screen, press **2** (A+BX) for a linear regression.



2. Enter the x-values into the table by pressing **2** **=** **3** **=** **7** **=**.



3. Use the arrow keys to move to the top of the y-column and enter the y-values by pressing **5** **=** **8** **=** **2** **0** **=**.



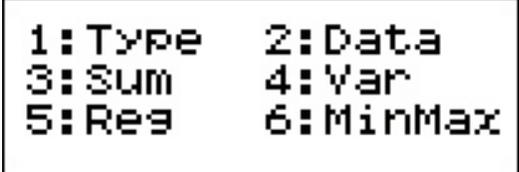
STAT MODE

Finding a Regression:

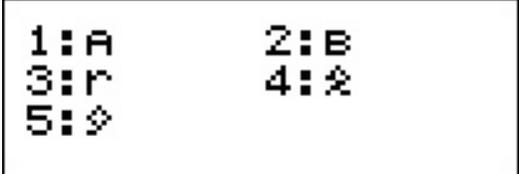
1. To find the regression equation, press **AC** to clear the screen.
2. Press **SHIFT** **1** (STAT) to display the Statistics Menu.
3. Press **5** (Reg) to find the coefficients for the linear regression equation.
4. Press **1** (A) **▢** to find the value of **A**.
5. To find the value of **B**, repeat the process.
Press **SHIFT** **1** **5** **2** (B) **▢**.



STAT 0



1:Type 2:Data
3:Sum 4:Var
5:Reg 6:MinMax



1:A 2:B
3:r 4: \hat{x}
5: \hat{y}



STAT 0
A -1



STAT 0
B 3

6. The values of the correlation coefficient (r), the estimated value of X (\hat{x}), and the estimated value of Y (\hat{y}) can also be found.



STAT 0
r 1



STAT 0
Ans2
0.6666666667



STAT 0
Ans3 1

TABLE MODE

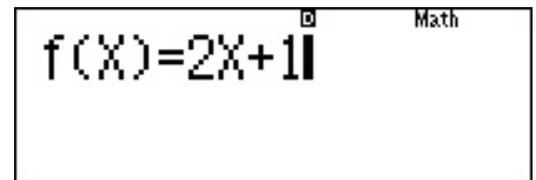
TABLE generates a number table based on one or two functions, entered as $f(x)$ and/or $g(x)$. Press **MODE** **3** to enter TABLE mode.



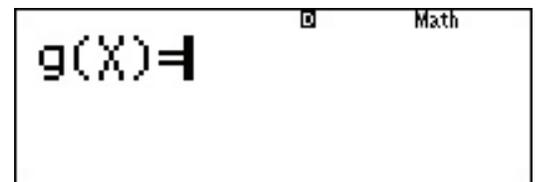
*Note: Be sure to input the x variable (**ALPHA** **▷**) when generating a number table. All other variables will be handled as constants.*

1. Enter the function $f(x) = 2x + 1$ by pressing

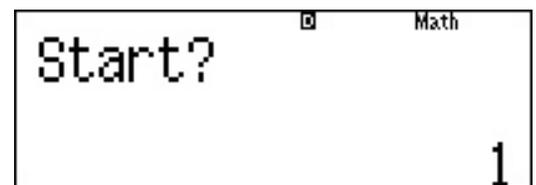
2 **ALPHA** **▷** **+** **1**.



2. Press **≡** to store that function. Another function can be entered to compare the two functions. Press **≡** to move to the next screen and only have one function entered.



3. Set a starting x -value for the table. The default value is 1. To change the value, enter the new value and press **≡**. To keep the existing value, press **≡**.



4. Next, set an ending x -value for the table. The default value is 5. To change the value, enter the new value and press **≡**. To keep the existing value, press **≡**.

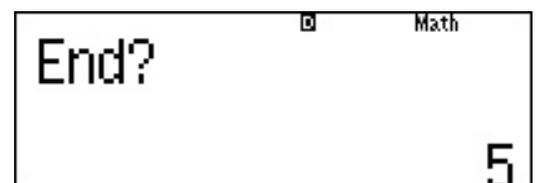
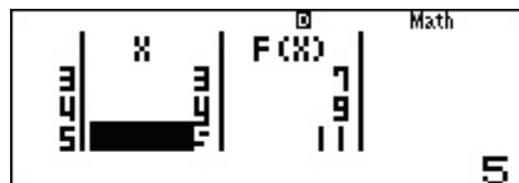
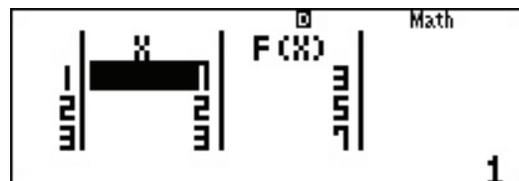
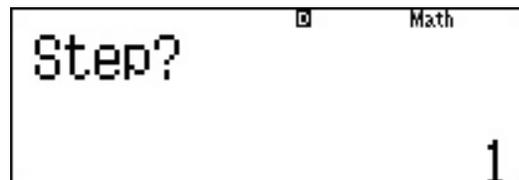


TABLE MODE

5. Set a step value for the table. The default value is 1. To change the value, enter the new value and press $\boxed{=}$. To keep the existing value, press $\boxed{=}$.

6. Use the \blacktriangle and \blacktriangledown arrows to scroll through the entire table.



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