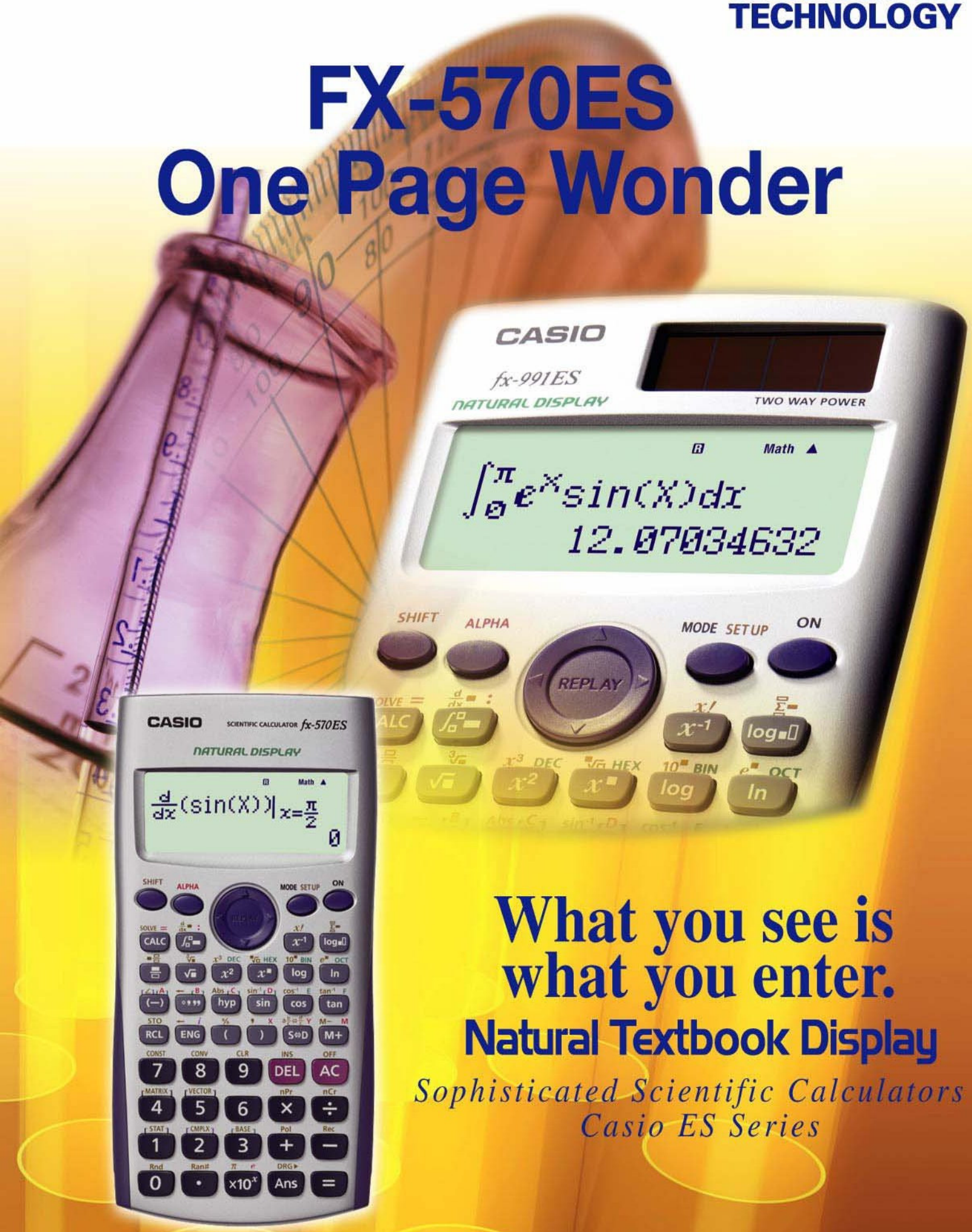
CASIO

SUPPORT CLASSROOM with TECHNOLOGY

FX-570ES
One Page Wonder



What you see is what you enter.

Natural Textbook Display

Sophisticated Scientific Calculators
Casio ES Series

INTRODUCTION

Welcome to the world of Casio's Natural Display scientific calculators.

Our experiences of working with people have us understand more about obstacles people face adapting to a new scientific calculator, or any ICT tool for that matter. The most prevalent issue is how to get started using the tool in the shortest time possible. This is especially true as the scientific calculator gets more sophisticated; yet people have less time to learn its many functions through the user manual even it is extremely comprehensive.

To resolve this issue, we came up with this one-page exercises idea. The key idea is to design a series of exercises where each exercise should be just 1-page long and is independent of each other. One important criterion of the design is that we want you to be able to use any one of these exercises with the calculator immediately, regardless of your calculator skill's level. Just as important is that each exercise must be short, functional yet not too complex to use. So, based on the design principles just described we are proud to present to you the ***FX-570ES One Page Wonder***.

You can begin using this resource by first look up the **LIST OF EXERCISES** in next page and find the exercise which suits your needs. The page number of each exercise is given at the middle column of the list. You can make copies of any of the activities for your class, share it with your friends, or just use them yourself. We would like to stress that the one-page exercise is not a replacement of the user guide that comes with your calculator but rather to serve as a supplement to it.

Please write to us at info@qed-edu.com if you have any comments or ideas. We love to hear from you.

Mun Chou, Fong
QED Education Scientific Sdn. Bhd.

LIST OF EXERCISES

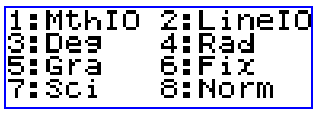
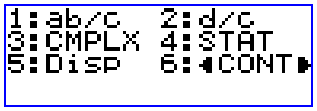
Special Notes for User of FX-350ES, FX-570ES and FX-991ES:

- The FX-ES calculator has a setting area (tap SHIFT MODE) where we can make preferred settings. When we get unexpected calculation output from the calculator, usually it is due to inappropriate setting. It can easily be resolved: tap SHIFT MODE, check the current setting, and make the change.

- With list based statistics there is no need to reset STAT mode memory. However, the STAT setting now becomes quite important. For example, if “Frequency” is turn ON, then you would see FREQ column appears and this affects your data entry process and subsequently the output will be too. Therefore each time you start using STAT mode, it is generally a good practice to clear the Setup by tapping SHIFT 9 1 =; alternatively, you can check the STAT setting through SHIFT MODE ▼ 4 and make the change.

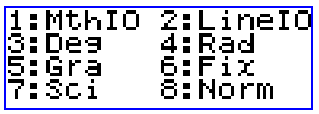
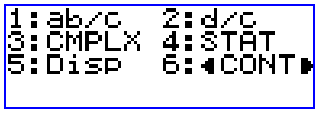
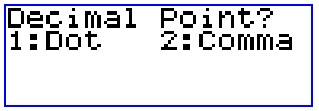
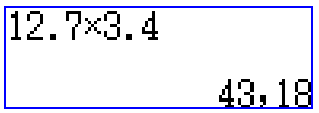
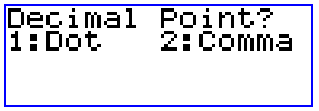
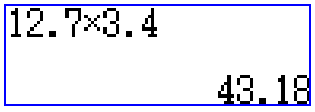
Casio FX-570ES One Page Exercise:
SETTING DISPLAY 1

>>> Set the contrast of the display.

What To Do	The Screen Display
First turn on the calculator and set calculator to "COMP" mode.	
[ON] [MODE] [1]	
Enter the calculator set up, then go down and select "CONT".	
[SHIFT] [MODE]	
[▼]	
[6]	
Now use the left right arrow keys to control contrast. Once done press "AC".	
[◀] [▶] [AC]	

Casio FX-570ES One Page Exercise:
SETTING DISPLAY 2

>>> To set the decimal point displayed as comma.

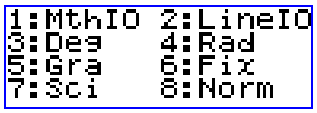
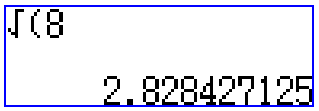
What To Do	The Screen Display
First turn on the calculator and set calculator to "COMP" mode.	
ON MODE 1	
Enter the calculator set up, go down the menu, select "Disp" and choose "Comma".	
SHIFT MODE	
▼	
5	
2	
Try pressing the following to see the outcome.	
1 2 • 7 × 3 • 4 = S⇔D	
To display the decimal point as dot, return to set up and select "Dot" in "Disp".	
SHIFT MODE ▼ 5	
1 S⇔D	

Casio FX-570ES One Page Exercise:
SETTING DISPLAY 3

>>> Set the Input Output method of the calculator as MathIO.

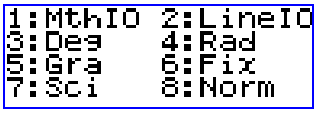
What To Do	The Screen Display
First turn on the calculator and set the calculator to "COMP" mode.	
ON MODE 1	
Enter the calculator set up, and select "MathIO".	
SHIFT MODE	
1	
Now the calculator is in Natural Input Output Display or MathIO. Try pressing the following.	
√ 8 =	

>>> To reset the Input Output method of the calculator as LineIO.

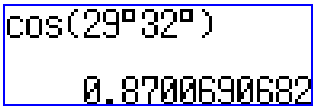
What To Do	The Screen Display
After the above exercise, enter the calculator set up, and select "LineIO".	
SHIFT MODE	
2	
Now the calculator is in normal display or LineIO. Try pressing the following.	
√ 8 =	

Casio FX-570ES One Page Exercise:
BASIC SCIENTIFIC CALCULATIONS 1

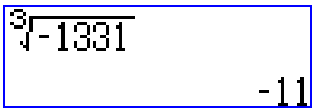
>>> Find $sin\,36°$**.**

What To Do	The Screen Display
First turn on the calculator, set calculator to "COMP" mode and angle to "Deg". Also, choose to do the calculation with MathIO.	
[ON] [MODE] [1] [SHIFT] [MODE] [3]	
[SHIFT] [MODE] [1]	
Now enter the expression for evaluation.	
[sin] [3] [6] [)] [=]	

>>> Evaluate $cos(29°32')$**.**

What To Do	The Screen Display
After the exercise above, we enter this expression for evaluation.	
[cos] [2] [9] [°'"] [3] [2] [°'"] [)] [=]	

>>> Find $\sqrt[3]{-1331}$**.**

What To Do	The Screen Display
Following the above example, first we enter the cube root sign.	
[SHIFT] [√▪] ($\sqrt[3]{▪}$)	
Now enter the radicand for evaluation.	
[(–)] [1] [3] [3] [1] [=]	

Casio FX-570ES One Page Exercise:
BASIC SCIENTIFIC CALCULATIONS 2

>>> Evaluate C_6^{15}.

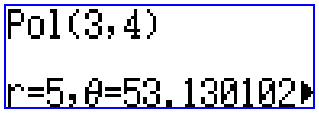
What To Do	The Screen Display
First turn on the calculator and set calculator to "COMP" mode.	
ON MODE 1	
Now enter the expression of the combination for evaluation.	
1 5 SHIFT ÷ 6 =	

>>> Express the rectangular coordinates of (3, 4) in polar form.

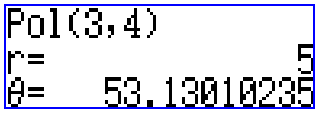
What To Do	The Screen Display
*After the above exercise, we should set the calculator to degree mode if it is not**.*	
SHIFT MODE 3	

** A D is displayed top of screen when in degree mode.

Now we call up the "Pol" function, enter the given coordinates, and then evaluate.

SHIFT + 3 SHIFT) 4) =	

In polar form (3,4) is $5\angle 53.13°$. If your calculator is in LineIO mode then the display is as below.



Casio FX-570ES One Page Exercise:
BASIC SCIENTIFIC CALCULATIONS 3

>>> Evaluate $\left(\frac{1}{1+e^2}\right)^4$ **.**

What To Do | **The Screen Display**

First turn on the calculator, set calculator to "COMP" mode and set up to MathIO.

ON MODE 1 SHIFT MODE 1

Now we enter the fourth power rational expression for evaluation.

(▤ 1 ▼ 1 + SHIFT ln ($e^{\blacksquare}$) 2 ▶ ▶) $x^{\blacksquare}$ 4 =

$\left(\frac{1}{1+e^2}\right)^4$
$2.019052471 \times 10^{-4}$

>>> Find out what 5.7% of 2359 is and then store this value to variable A.

What To Do | **The Screen Display**

First we enter the expression to find the value.

2 3 5 9 × 5 • 7 SHIFT ((%) =

2359×5.7%
134.463

Now store the answer into A.

SHIFT RCL (−)

Ans→A
134.463

>>> Convert 2π **to its degree equivalent.**

What To Do | **The Screen Display**

After the previous exercise, we enter the following to find its degree equivalent.

2 SHIFT ×10^x (π) SHIFT Ans (DRG▶) 2 =

2π^r
360

Casio FX-570ES One Page Exercise:
BASIC SCIENTIFIC CALCULATIONS 4

>>> Solve $\tan x = 2.3$ **for x between 0° and 90°.**

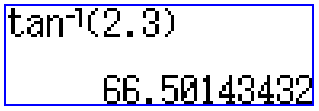
What To Do	The Screen Display

First turn on the calculator, set calculator to "COMP" mode and set up to MathIO. If needed, set the calculator angle to degree mode.

[ON] [MODE] [1] [SHIFT] [MODE] [1]
[SHIFT] [MODE] [3]

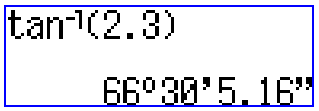
To solve the problem is to find the inverse tangent of 2.3.

[SHIFT] [tan] (tan⁻¹) [2] [•] [3] [)] [=]



We can display the answer in DMS format easily.

[°'"]

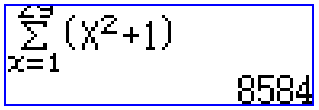


>>> Evaluate $\sum_{1}^{29}(x^2+1)$**.**

What To Do	The Screen Display

After the exercise above, we enter the summation expression as required.

[SHIFT] [log▪□] (Σ▪) [ALPHA] [)] [x²] [+] [1] [▼] [1]
[▲] [2] [9] [=]



Casio FX-570ES One Page Exercise:
FRACTIONS

>>> Perform this fraction calculation $\frac{2}{5}+\frac{5}{6}$.

What To Do	The Screen Display
First turn on the calculator and set calculator to "COMP" mode.	
ON MODE 1	
Now press the fraction key, and then enter the first fraction.	
	$\frac{\square}{\square}$
2 ▼ 5	$\frac{2}{5}$
Move cursor to the right of first fraction and enter the operation "+".	
▶ +	$\frac{2}{5}+$
Now enter the second fraction.	
5 ▼ 6	$\frac{2}{5}+\frac{5}{6}$
Press "=" to get the result. You can also display result in proper form.	
=	$\frac{2}{5}+\frac{5}{6}=\frac{37}{30}$
SHIFT S⇔D $(a\frac{b}{c}\leftrightarrow\frac{d}{c})$	$\frac{2}{5}+\frac{5}{6}=1\frac{7}{30}$

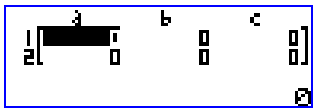
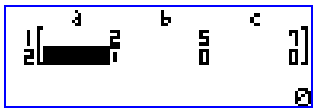
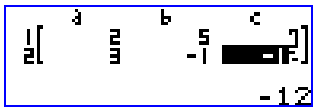
Casio FX-570ES One Page Exercise:
TABLE OF VALUES

>>> Create a table of values for $y = \cos x$ **for** $0° \le x \le 180°$ **.**

What To Do	The Screen Display
First turn on the calculator and set calculator to "TABLE" mode. If needed, set angle to degree.	
ON MODE 7 SHIFT MODE 3	f(X)=
Now enter the expression.	
cos ALPHA))	f(X)=cos(X)
=	Start? 1
We use 0 as Start value, 180 as End value and 30 as Step value. (Step value = increment size of x)	
0 = 1 8 0 =	Step? 1
3 0 =	X / F(X) 1: 0 / 1 2: 30 / 0.866 3: 60 / 0.5 0
View the table using the up down arrow keys.	
▲ ▼	X / F(X) 3: 60 / 0.5 4: 90 / 0 5: 120 / -0.5 90

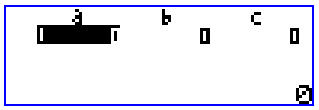
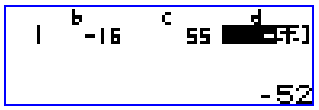
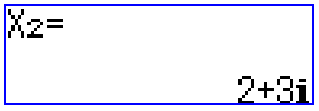
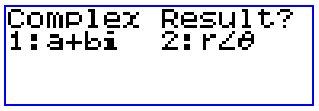
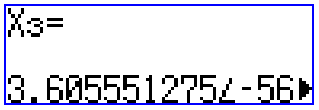
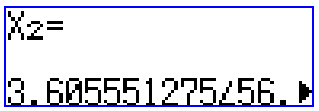
Casio FX-570ES One Page Exercise:
SIMULTANEOUS EQUATIONS

>>> Solve the equations $2x+5y=7$ and $3x-y=-12$ simultaneously.

What To Do	The Screen Display
First turn on the calculator.	
[ON]	
Go to Mode, select "EQN" and then choose to solve the 2-unknown simultaneous equations.	
[MODE]	
[5] [1]	
Enter the coefficients and constant of the first equation.	
[2] [=] [5] [=] [7] [=]	
Now enter the coefficients and constant of the second equation.	
[3] [=] [(−)] [1] [=] [(−)] [1] [2] [=]	
To find the solutions press "=" a few times.	
[=]	
[=]	

Casio FX-570ES One Page Exercise:
CUBIC EQUATIONS

>>> Solve the cubic equation of $3x^3 - 16x^2 + 55x - 52 = 0$ **.**

What To Do	The Screen Display
First turn on the calculator, select "EQN" mode and choose to solve for cubic equation.	
ON	
MODE 5 4	
Enter the coefficients and then solve the equation.	
3 = (−) 1 6 = 5 5 = (−) 5 2 =	
=	
To see the rest of the solutions press "=" a couple of times.	
=	
=	
The complex solutions can be displayed in polar form as follow.	
SHIFT MODE ▼ 3	
2	
View the other solutions using the up down arrow keys. You can return to the $a+ib$ *form at set up.*	
▼ ▲	
SHIFT MODE ▼ 3 1	

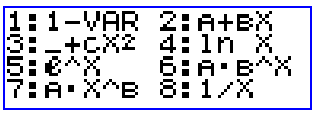
Casio FX-570ES One Page Exercise:
SINGLE VARIABLE STATISTICS 1

>>> Find the mean and sample standard deviation for these data: 2, 4, 7, 4, 9, 13, 6, 8, 7.

What To Do	The Screen Display

Turn on the calculator, clear the set up[1] and set calculator to "STAT" mode.

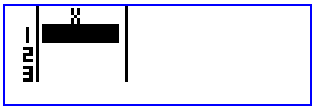
ON SHIFT 9 1 = AC MODE 3



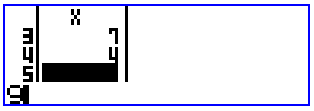
[1] It is generally a good practice to clear the set up as you begin statistical calculation. See List of Exercises page for explanation.

Now choose to do calculation for "1-VAR' and enter the data into the list.

1

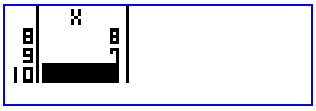


2 = 4 = 7 = 4 = 9



Continue entering the rest of the data.

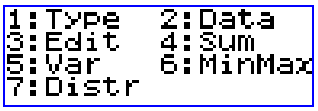
= 1 3 = 6 = 8 = 7 =



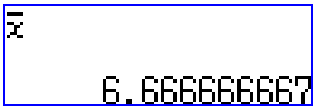
Next we clear the screen and find the sample mean.

AC

SHIFT 1

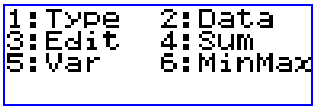


5 2 =

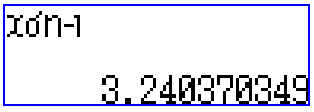


Now we find the sample standard deviation.

SHIFT 1



5 4 =



Casio FX-570ES One Page Exercise:
SINGLE VARIABLE STATISTICS 2: GROUPED DATA

>>> Find the standard deviation of the grouped data given here.

x	6	15	23	32	40
Frequency	5	13	15	9	6

What To Do **The Screen Display**

Turn on the calculator, clear the set up[1] and then enter set up mode to turn "Frequency" on.

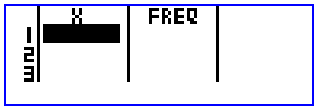
ON SHIFT 9 1 = AC SHIFT MODE ▼ 4 1

[1] It is generally a good practice to clear the set up as you begin statistical calculation. See List of Exercises page for explanation.

Next we set calculator to "STAT" mode. Then choose "1-VAR" to enter the data provided.

MODE 3

1

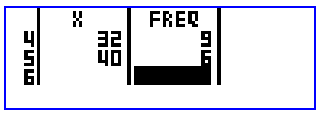


Enter the x-data at the X-column first. .

6 = 1 5 = 2 3 = 3 2 = = 4 0 =

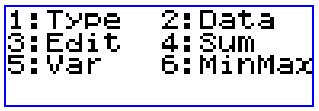
Continue by entering frequency data at the FREQ-column.

▼ ▶ 5 = 1 3 = 1 5 = 9 = 6 =

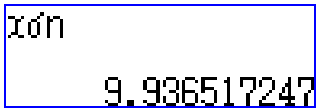


Now clear the screen and find the standard deviation.

AC SHIFT 1



5 3 =



Casio FX-570ES One Page Exercise:
LINEAR REGRESSION

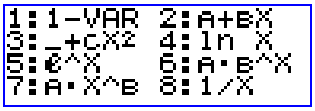
>>> Determine the linear correlation coefficient for the paired sample data below:

x	65	75	57	42	86	73	80
y	72	59	68	54	92	68	72

What To Do **The Screen Display**

Turn on the calculator and clear the set up[1], then set calculator to "STAT" mode.

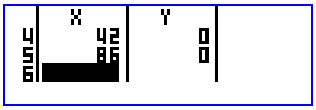
ON SHIFT 9 1 = AC MODE 3



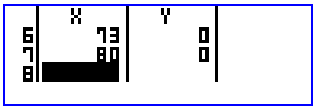
[1] It is generally a good practice to clear the set up as you begin statistical calculation. See List of Exercises page for explanation.

Select to do calculation for "A+BX" and enter the x data at the X-column.

2 6 5 = 7 5 = 5 7 =
4 2 = 8 6 =

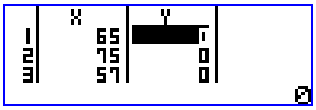


7 3 = 8 0 =

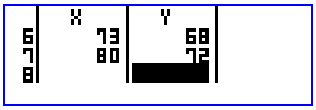


Next we go to Y-column and enter the y data at this column.

▼ ▶



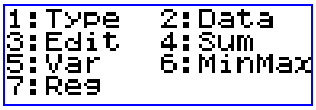
7 2 = 5 9 = 6 8 = 5
4 = 9 2 = 6 8 = 7 2
=



Next we clear the screen and find the correlation coefficient.

AC

SHIFT 1



7 3 =

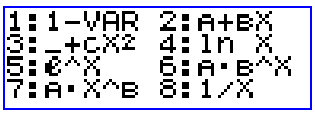
Casio FX-570ES One Page Exercise:
STANDARD NORMAL DISTRIBUTION

>>> Find P(X < -0.259) **if variable X ~ N(0,1).**

What To Do | **The Screen Display**

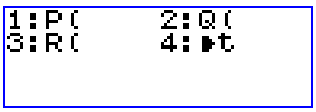
Turn on the calculator and then set calculator to "STAT" mode.

ON MODE 3



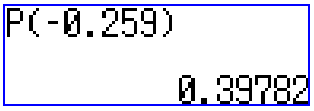
Clear the screen and go to distribution mode.

AC SHIFT 1 7



Choose "P(" and find the probability.

1 (–) 0 • 2 5 9) =



>>> Find P(X > 1.83) **if variable X ~ N(0,1).**

What To Do | **The Screen Display**

After the exercise above, return to distribution mode to choose "R" and find the probability.

SHIFT 1 7 3
1 • 8 3) =

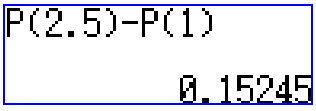
>>> Find P(1 < X < 2.5) **if variable X ~ N(0,1).**

What To Do | **The Screen Display**

Continuing from the above exercise, the fastest way to find this probability should be as follow.

SHIFT 1 7 1 2 • 5)

– SHIFT 1 7 1 1) =



Casio FX-570ES One Page Exercise:
LOGARITHMICS

>>> Calculate $log\ 23$**.**

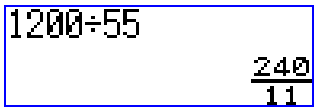
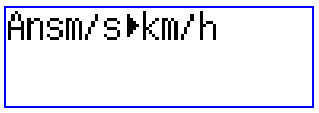
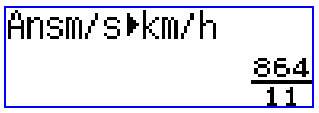
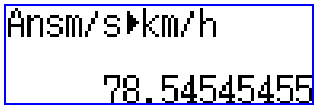
What To Do	The Screen Display
Turn on the calculator, set calculator to "COMP" mode and set up to MathIO.	
[ON] [MODE] [1] [SHIFT] [MODE] [1]	
Press the following to calculate the expression.	
[log] [2] [3] [)] [=]	log(23) 1.361727836

>>> Find $log_7\ 23$ **correct to 5 decimal places.**

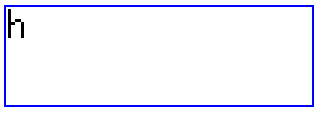
What To Do	The Screen Display
From the exercise above, press the following to calculate the given logarithmic expression.	
[log▪□] [7] [▶] [2] [3]	$\log_7(23)$
Press "=" to get the numerical result.	
[=]	$\log_7(23)$ 1.61132528
Now set the calculator to display the result correct up to 5 decimal places.	
[SHIFT] [MODE] [6] [5]	$\log_7(23)$ 1.61133
Press the following to return the calculator to normal (Norm-1) display.	
[SHIFT] [MODE] [8]	Norm 1~2?
[1]	$\log_7(23)$ 1.61132528

Casio FX-570ES One Page Exercise:
SCIENTIFIC CONVERSIONS AND CONSTANTS

>>> A car travels 1200m in 55 second. Find its average speed for that period in km/hour.

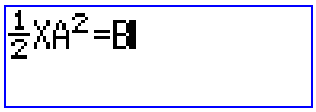
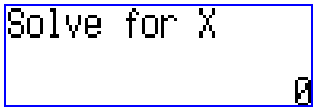
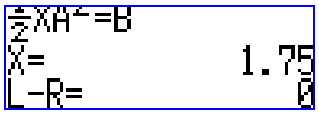
What To Do	The Screen Display
First turn on the calculator and set calculator to "COMP" mode.	
[ON] [MODE]	
[1]	
Next we calculate the average speed of the car.	
[1] [2] [0] [0] [÷] [5] [5] [=]	
The answer above is in meter/second. To convert it into km/hour we refer to the conversion codes at the cover of the calculator.	
[SHIFT] [8] [2] [0]	
Press "=" to find the result of the conversion. We can also view the result in decimal form.	
[=]	
[S⇔D]	

>>> State the value of Planck's constant from the calculator.

What To Do	The Screen Display
After the exercise above, we can choose to display the Planck's constant h.	
[SHIFT] [7] [0] [6]	
[=]	

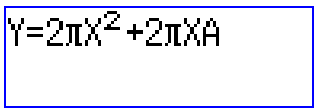
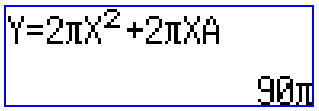
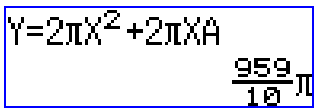
Casio FX-570ES One Page Exercise:
SOLVE FUNCTION

>>> Solve the equation $\frac{1}{2}at^2 = s$ for a if given that $s = 56$ when $t = 8$.

What To Do	The Screen Display
Turn on the calculator, set calculator to "COMP" mode and set up to MathIO.	
ON MODE 1 SHIFT MODE 1	
As we want to solve the problem for a, we must use variable X for a. For t and s we use the variables A and B. First we enter the expression.	
▤ 1 ▼ 2 ▶ ALPHA) ALPHA (−) x^2 ALPHA CALC ALPHA °,,,	
Then we enter the corresponding values given (remember A is for t and B is for s.)	
SHIFT CALC	
8 = 5 6 =	
=	

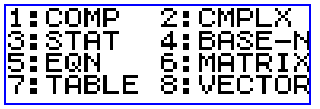
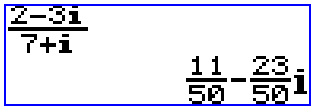
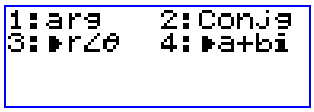
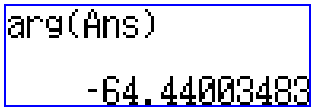
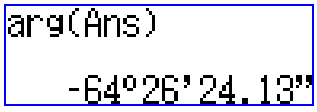
Casio FX-570ES One Page Exercise:
CALC FUNCTION

>>> Find the surface areas of a cylindrical can using $y = 2\pi x^2 + 2\pi xh$, when $(x,h) = (3,12)$ and $(3.5,10.2)$, where x, h are respectively the radius and height of the can.

What To Do	The Screen Display
Turn on the calculator, set calculator to "COMP" mode and set up to MathIO.	
ON MODE 1 SHIFT MODE 1	
We use variables X and Y for x and y, and the variable A for h. First we enter the expression.	
ALPHA S⇔D ALPHA CALC 2 SHIFT ×10^x (π) ALPHA) x^2 + 2 SHIFT ×10^x (π) ALPHA) ALPHA (−)	
Now we enter the first pair of values given, i.e. (3, 12).	
CALC	
3 = 1 2 =	
Next we enter the second pair of values given, i.e. (3.5, 10.2).	
CALC 3 • 5 =	
1 0 • 2 =	

Casio FX-570ES One Page Exercise:
COMPLEX NUMBERS

>>> Find the argument of $\frac{2-3i}{7+i}$.

What To Do	The Screen Display
First turn on the calculator and set calculator to "CMPLX" mode. A small "CMPLX" icon will appear at top of screen.	
ON MODE	
2	
Now we calculate the division of the two complex numbers using fraction.	
▣	
2 − 3 ENG (*i*) ▼	
7 + ENG (*i*)	
=	
Next to find the argument of the expression we use the "arg" function at the calculator.	
SHIFT 2	
Here we choose "arg" and use the Ans key to help find the argument.	
1 Ans) =	
We can also display the outcome in DMS form.	
°’”	

Casio FX-570ES One Page Exercise:
BASE-N CALCULATIONS

>>> Express 127_8 in Binary and Hexadecimal.

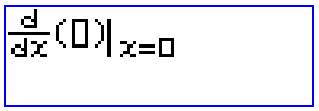
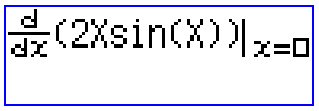
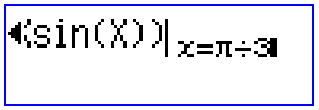
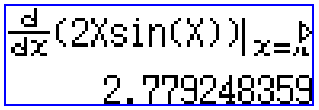
What To Do	The Screen Display
First turn on the calculator and set calculator to "BASE-N" mode.	
ON MODE 4	Dec 0
Set the display to Octal and enter the number.	
In 1 2 7 =	127 Oct 0000000127
So 127_8 in Binary and Hexadecimal are as follow.	
log	127 Bin 0000000001010111
$x^{\blacksquare}$	127 Hex 00000057

>>> Calculate $215_{10} + 10100_2$ and express the answer in Octal.

What To Do	The Screen Display
Following the exercise above, first we set the display back to Decimal. Then, we enter the number 215 and "+".	
x^2	127 Dec 87
2 1 5 +	215+ Dec 87
Now open the BASE-N function, use the number base function and enter the binary number.	
SHIFT 3 ▼ 3 1 0 1 0 0	215+b10100 Dec 87
Press "=" to calculate and then set display to Octal to see the answer in Octal.	
= In	215+b10100 Oct 0000000353

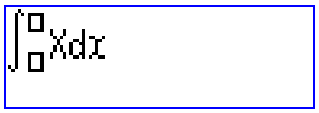
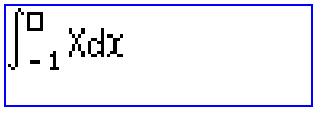
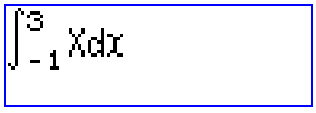
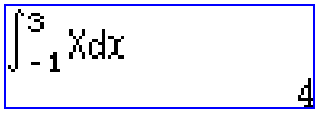
Casio FX-570ES One Page Exercise:
NUMERICAL DERIVATIVE

>>> Find the value of $\frac{d}{dx}(2x\sin x)$ **when** x **is** $\frac{\pi}{3}$.

What To Do	The Screen Display
First turn on the calculator, set calculator to "COMP" mode, and angle in radian.	
ON MODE 1 SHIFT MODE 4	
Press the derivative key and enter the composite expression "2xsinx".	
SHIFT $\int$ ($\frac{d}{dx}$)	
2 ALPHA) sin ALPHA))	
Now got to back and enter the value of "pi/3"..	
▶ SHIFT ×10^x (π) ÷ 3	
Press "=" to get the numerical outcome of the derivative.	
=	

Casio FX-570ES One Page Exercise:
DEFINITE INTEGRAL

>>> Calculate the definite integral $\int_{-1}^{3} x\,\mathrm{d}x$**.**

What To Do	The Screen Display
First turn on the calculator and set calculator to "COMP" mode. ON MODE 1	
Press the integral key, and enter the expression "x". ∫ ALPHA)	
Go down to lower limit and enter the value of "-1". ▼ (−) 1	
Now go up to enter the value of "3" for upper limit. ▲ 3	
Press "=" to get the numerical outcome of the integration. =	

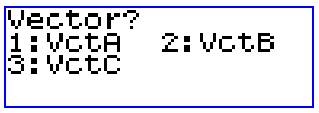
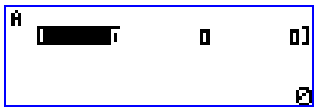
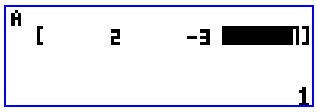
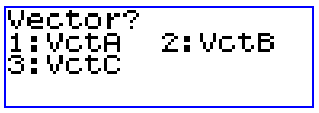
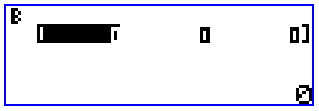
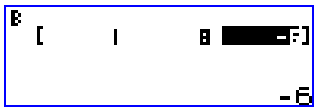
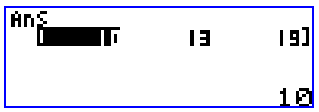
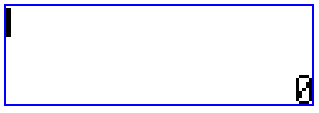
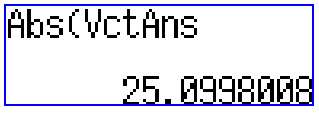
Casio FX-570ES One Page Exercise:
MATRIX OPERATIONS

>>> Calculate the determinant and the inverse of $A = \begin{bmatrix} 3 & -5 \\ 4 & 7 \end{bmatrix}$ **if it exists.**

What To Do	The Screen Display
First turn on the calculator and set calculator to "MATRIX" mode.	
[ON] [MODE] [6]	Matrix? 1:MatA 2:MatB 3:MatC
Next choose to define MatA as a 2x2 matrix.	
[1] [5]	A [0 0] [0 0] 0
Enter all elements for MatA.	
[3] [=] [(−)] [5] [=] [4] [=] [7] [=]	A [3 −5] [4 7] 7
Now we clear the screen and use the matrix operations to find the determinant for A.	
[AC] [SHIFT] [4] [7]	det(0
[SHIFT] [4] [3] [)] [=]	det(MatA) 41
As determinant of A is not 0, the inverse exists and we can find the inverse of A.	
[SHIFT] [4] [3] [x^{-1}]	MatA⁻¹ 41
[=]	Ans [0.1707 0.1219] [−0.1463 0.0731] −4.41

Casio FX-570ES One Page Exercise:
VECTORS CALCULATIONS

>>> Find the cross product of $(2i-3j+k)\times(i+8j-6k)$, then calculate its magnitude.

What To Do	The Screen Display
Turn on the calculator and set calculator to "VECTOR" mode.	
ON MODE 8	
Next choose to define VctA as the vector $2i-3j+k$.	
1 1	
2 = (–) 3 = 1 =	
Next we define VctB as $i+8j-6k$.	
SHIFT 5 2	
2 1	
1 = 8 = (–) 6 =	
Now clear the screen, and then find the cross product of these two vectors.	
AC SHIFT 5 3 × SHIFT 5 4	
=	
Finally, we find the magnitude of this new vector using VctAns.	
AC	
SHIFT hyp SHIFT 5 6 =	

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Distributor:
Marco Corporation (M) Sdn. Bhd. (013431-H)
No. 2, 2nd Floor, Jalan Segambut, 51200 Kuala Lumpur.
Tel: 03-4043 3111 Fax: 03-4041 9315
Website: **www.marco-groups.com**