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fx-115ES

fx-570ES

fx-991ES

Appendix Appendiks

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Appendice Appendiks

附錄 Aanhangsel

부속 자료 Приложение

ملحق Függelék

Lampiran Dodatek

Apêndice Dodatek

Anhang Phụ lục

Appendice 附录

Bilaga

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RCA502126-001V01

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#001**MATH**
 $\frac{2}{3} + \frac{1}{2}$
 2 $\frac{\square}{\square}$ \downarrow 3 \rightarrow +
 $\frac{1}{2}$ \downarrow 2 =

 $\frac{2}{3} + \frac{1}{2}$
 Math \blacktriangle
 $\frac{7}{6}$
LINE
 $2 \frac{1}{3} + 1 \frac{2}{2}$
 2 $\frac{\square}{\square}$ 3 + 1
 $\frac{2}{2}$ =

 $2 \frac{1}{3} + 1 \frac{2}{2}$
 $7 \frac{1}{6}$
#002

$$3 \frac{1}{4} + 1 \frac{2}{3} = 4 \frac{11}{12}$$

MATH
 $3 \frac{1}{4} + 1$
 SHIFT $\frac{\square}{\square}$ ($\frac{\square}{\square}$) 3 \rightarrow
 1 \downarrow 4 \rightarrow +

 $3 \frac{1}{4} + 1$
 Math \blacktriangle
 $3 \frac{1}{4} + 1 \frac{2}{3}$
 SHIFT $\frac{\square}{\square}$ ($\frac{\square}{\square}$) 1 \rightarrow 2
 \downarrow 3 =

 $3 \frac{1}{4} + 1 \frac{2}{3}$
 Math \blacktriangle
 $4 \frac{11}{12}$
LINE
 $3 \frac{1}{4} + 1 \frac{2}{3}$
 3 $\frac{\square}{\square}$ 1 $\frac{\square}{\square}$ 4 +
 1 $\frac{\square}{\square}$ 2 $\frac{\square}{\square}$ 3 =

 $3 \frac{1}{4} + 1 \frac{2}{3}$
 $4 \frac{11}{12}$

$$4 - 3 \frac{1}{2} = \frac{1}{2}$$

MATH
 $4 - 3 \frac{1}{2}$
 4 - SHIFT $\frac{\square}{\square}$ ($\frac{\square}{\square}$)
 3 \rightarrow 1 \downarrow 2 =

 $4 - 3 \frac{1}{2}$
 Math \blacktriangle
 $\frac{1}{2}$
LINE
 $4 - 3 \frac{1}{2}$
 4 - 3 $\frac{\square}{\square}$ 1 $\frac{\square}{\square}$ 2 =

 $4 - 3 \frac{1}{2}$
 $1 \frac{1}{2}$

#003 LINE

2 SHIFT (C) (%) =

$$2\%$$

$$0.02$$
#004 LINE1 5 0 X 2 0
SHIFT (C) (%) =
$$150 \times 20\%$$

$$30$$
#005 LINE6 6 0 ÷ 8 8 0
SHIFT (C) (%) =
$$660 \div 880\%$$

$$75$$
#006 LINE2 5 0 0 + 2 5 0 0
X 1 5 SHIFT (C) (%) =
$$2500 + 2500 \times 15\%$$

$$2875$$
#007 LINE3 5 0 0 - 3 5 0 0
X 2 5 SHIFT (C) (%) =
$$3500 - 3500 \times 25\%$$

$$2625$$
#008 LINE1 6 8 + 9 8 +
7 3 4 =
$$168 + 98 + 734$$

$$1000$$

= Ans X 2 0 SHIFT (C) (%) =

$$\text{Ans} - \text{Ans} \times 20\%$$

$$800$$

#009 LINE

(5 0 0 + 3 0 0)
 ÷ 5 0 0 SHIFT ((%) =

$(500+300) \div 500\%$
 160

#010 LINE

(4 6 - 4 0) ÷
 4 0 SHIFT ((%) =

$(46-40) \div 40\%$
 15

▶▶▶▶ DEL 8 =

$(48-40) \div 40\%$
 20

#011 LINE

2 [] 0 [] 3 0 [] =

$2^{\circ}0'30''$
 $2^{\circ}0'30''$

#012 LINE

2 [] 2 0 [] 3 0 [] +
 0 [] 3 9 [] 3 0 [] =

$2^{\circ}20'30'' + 0^{\circ}39'3''$
 $3^{\circ}0'0''$

#013 LINE

2 . 2 5 5 =

2.255
 2.255

[]

2.255
 $2^{\circ}15'18''$

2.255
2.255

#014 **LINE** $4 \times 3 + 2.5 = 14.5$
 $4 \times 3 - 7.1 = 4.9$

4 X 3 + 2 . 5 = $4 \times 3 + 2.5$
14.5

AC | 0

◀ $4 \times 3 + 2.5$ | 0

DEL DEL DEL DEL 4×3 | 0

= 7 . 1 = $4 \times 3 - 7.1$
4.9

#015 **LINE** $\frac{9 \times 6 + 3}{5 \times 8} = 1.425$

9 X 6 + 3 = $9 \times 6 + 3 \rightarrow B$
 SHIFT RCL (STO) (B) 57

5 X 8 SHIFT RCL (STO) hyp (C) $5 \times 8 \rightarrow C$
40

α B \div α hyp C $=$

$$B \div C = 1.425$$

#016 **LINE**

α S+D Y α CALC $=$ α X
 $+ 2 \alpha$ A

$$Y = X + 2A$$

CALC

$$X?$$

*1

$1 =$

$$A?$$

*2

$1 =$

$$Y = X + 2A$$

*3

CALC

$$X?$$

*4

$\text{Ans} =$

$$A?$$

*5

$2 =$

$$Y = X + 2A$$

*6

CALC Ans = 3 =

Y=X+2A
13

*7

CALC Ans = 4 =

Y=X+2A
21

*8

#017 MATH

ALPHA S+D (Y) ALPHA CALC (=) ALPHA) (X)
x² - ALPHA) (X) + 1

Y=X²-X+1

SHIFT CALC (SOLVE)

Y?
21

*1

3 =

Solve for X
1

*2

1 =

Y=X²-X+1
X= 2
L-R= 0

= 7 = =

Y=X²-X+1
X= 3
L-R= 0

= 1 3 = =

Y=X²-X+1
X= 4
L-R= 0

$$\begin{aligned} & \boxed{=} \boxed{2} \boxed{1} \boxed{=} \boxed{=} \\ & \begin{array}{l} Y=X^2-X+1 \\ X= \\ L-R= \end{array} \end{array} \quad \begin{array}{l} \text{Math} \blacktriangle \\ 5 \\ 0 \end{array}$$

#018 **LINE** **Deg**

$$\boxed{\sin} \boxed{3} \boxed{0} \boxed{)} \boxed{=} \quad \begin{array}{l} \sin(30) \\ 0.5 \end{array}$$

$$\boxed{\text{SHIFT}} \boxed{\sin} (\sin^{-1}) \boxed{0} \boxed{\cdot} \boxed{5} \boxed{)} \boxed{=} \quad \begin{array}{l} \sin^{-1}(0.5) \\ 30 \end{array}$$

#019 **LINE**

$$\boxed{\text{hyp}} \boxed{1} (\sinh) \boxed{1} \boxed{)} \boxed{=} \quad \begin{array}{l} \sinh(1) \\ 1.175201194 \end{array}$$

$$\boxed{\text{hyp}} \boxed{5} (\cosh^{-1}) \boxed{1} \boxed{)} \boxed{=} \quad \begin{array}{l} \cosh^{-1}(1) \\ 0 \end{array}$$

#020 **LINE** **Deg**

$$\boxed{\cos} \boxed{\text{SHIFT}} \boxed{\times 10^{-1}} (\pi) \boxed{\text{SHIFT}} \boxed{\text{Ans}} (\text{DRG} \blacktriangleright) \boxed{2} \boxed{(r)} \boxed{)} \boxed{=} \quad \begin{array}{l} \cos(\pi^r) \\ -1 \end{array}$$

$$\boxed{\cos} \boxed{1} \boxed{0} \boxed{0} \boxed{\text{SHIFT}} \boxed{\text{Ans}} (\text{DRG} \blacktriangleright) \boxed{3} \boxed{(g)} \boxed{)} \boxed{=} \quad \begin{array}{l} \cos(100^g) \\ 0 \end{array}$$

#021 **MATH****Deg**SHIFT COS (cos⁻¹) (←) 1)
=
 $\cos^{-1}(-1)$
180
RadSHIFT COS (cos⁻¹) (←) 1)
=
 $\cos^{-1}(-1)$
 π
#022 $\log_2 16 = 4$ **MATH**log₂ 2 ▶ 1 6 =
 $\log_2(16)$
4
LINElog 2 SHIFT) (,))
1 6) =
 $\log(2, 16)$
4
#023 **LINE** $\log 16 = 1.204119983$

log 1 6) =

 $\log(16)$
1.204119983

*1

#024 **LINE** $\ln 90 (= \log_e 90) = 4.49980967$

ln 9 0) =

 $\ln(90)$
4.49980967
 $\ln e = 1$ ln ALPHA x10² (e)) =
 $\ln(e)$
1

#025 **LINE** $e^{10} = 22026.46579$

SHIFT ln (e^x) 1 0 =

e^(10) 22026.46579

#026 **MATH**

$1.2 \times 10^3 = 1200$

1 . 2 × 10³ =
SHIFT log (10^x) 3 =

1.2×10³ 1200

$(1 + 1)^{2+2} = 16$

(1 + 1) ^ { 2 + 2 } =

(1+1)²⁺² 16

#027

$(5^2)^3 = 15625$

MATH

(5 x²) ^ 3
SHIFT x² (x³) =

(5²)³ 15625

$(\sqrt{2} + 1)(\sqrt{2} - 1) = 1$

LINE (√ 2) + 1) (√ 2) - 1) =

(√(2)+1)(√(2)-1) 1

$5\sqrt[5]{32} = 2$

5 SHIFT xⁿ (√^x) 3 2) =

5^x√(32) 2

#028 **LINE** $(-2)^{\frac{2}{3}} = 1.587401052$

((-) 2) xⁿ
2 = 3) =

(-2)^(2/3) 1.587401052

#029 **LINE** $\sqrt[3]{5} + \sqrt[3]{-27} = -1.290024053$

SHIFT $\sqrt{\square}$ ($\sqrt[3]{\square}$) 5) +
 SHIFT $\sqrt{\square}$ ($\sqrt[3]{\square}$) (-) 2 7) =

$\sqrt[3]{(5)} + \sqrt[3]{(-27)}$
 -1.290024053

#030 **LINE** $\frac{1}{\frac{1}{3} - \frac{1}{4}} = 12$

(3 \times^{\square} - 4 \times^{\square}) \times^{\square} =

$(3^{-1} - 4^{-1})^{-1}$
 12

#031

MATH \int_{\square} In ALPHA) (X))
 ∇ 1 \blacktriangle ALPHA $\times 10^{\square}$ (e) =

$\int_1^e \ln(X) dx$
 1

LINE \int_{\square} In ALPHA) (X))
 SHIFT) (, 1 SHIFT) (,)
 ALPHA $\times 10^{\square}$ (e)) =

$\int(\ln(X), 1, e)$
 1

#032 **LINE**

\int_{\square} 1 \div ALPHA) (X) \times^{\square}
 SHIFT) (, 1 SHIFT) (, 5
 SHIFT) (, 1 $\times 10^{\square}$ (-) 7) =

$\int(1 \div X^2, 1, 5, 1 \times 10^{-8})$
 0.8

#033 **Rad**

MATH SHIFT \int_{\square} ($\frac{d}{dx}$) sin
 ALPHA) (X)) \blacktriangleright \square
 SHIFT $\times 10^{\square}$ (π) ∇ 2 =

$\frac{d}{dx}(\sin(X)) \Big|_{x=\frac{\pi}{2}}$
 0

LINE SHIFT \int_{\square} ($\frac{d}{dx}$) sin
 ALPHA) (X)) SHIFT) (,)
 SHIFT $\times 10^{\square}$ (π) \square 2) =

$d/dx(\sin(X), \pi, 2)$
 0

#034 **LINE**

SHIFT $\int \frac{d}{dx}$ (3) ALPHA \int (X)
 x^2 - 5 ALPHA \int (X) + 2
 SHIFT \int (,) 2 SHIFT \int (,) 1
 $\times 10^x$ (-) 1 2 \int =

$$d/dx(3x^2-5x+2, 2) = 7$$

#035

MATH SHIFT \log_{\square} (Σ -) ALPHA \int (X)
 + 1 ∇ 1 \blacktriangle 5 =

$$\sum_{x=1}^5 (X+1) = 20$$

LINE SHIFT \log_{\square} (Σ -) ALPHA \int (X)
 + 1 SHIFT \int (,) 1
 1 SHIFT \int (,) 5 \int =

$$\Sigma(X+1, 1, 5) = 20$$

#036 **Deg** $(X, Y) = (\sqrt{2}, \sqrt{2}) \rightarrow (r, \theta)$

MATH SHIFT + (Pol) $\sqrt{\square}$ 2 \blacktriangleright
 SHIFT \int (,) $\sqrt{\square}$ 2 \blacktriangleright \int =

$$\text{Pol}(\sqrt{2}, \sqrt{2}) \quad r=2, \theta=45$$

LINE SHIFT + (Pol) $\sqrt{\square}$ 2 \int
 SHIFT \int (,) $\sqrt{\square}$ 2 \int \int =

$$\text{Pol}(\sqrt{2}, \sqrt{2}) \quad r=2, \theta=45$$

#037 **LINE** **Deg** $(r, \theta) = (2, 30) \rightarrow (X, Y)$

SHIFT - (Rec) 2 SHIFT \int (,) 3
 0 \int =

$$\text{Rec}(2, 30) \quad X=1.732050808, Y=1$$

#038 **LINE**

(5 + 3) SHIFT $x!$ (x!) =

$$(5+3)! = 40320$$

#039**MATH**
 $\text{SHIFT} \text{ (hyp) (Abs) } 2 \text{ } \text{=} \text{ } 7 \text{ } \text{=}$
 $|2-7|$
5
LINE
 $\text{SHIFT} \text{ (hyp) (Abs) } 2 \text{ } \text{=} \text{ } 7 \text{ } \text{)} \text{ } \text{=}$
 $\text{Abs}(2-7)$
5
#040**LINE**
 $1 \text{ } 0 \text{ } 0 \text{ } 0 \text{ } \text{SHIFT} \text{ (Ran\#) } \text{=}$
 1000Ran\#
662
 =
 1000Ran\#
73
 =
 1000Ran\#
165
#041**LINE**
 $1 \text{ } 0 \text{ } \text{SHIFT} \text{ (} \times \text{) (nPr) } 4 \text{ } \text{=}$
 $10P4$
5040

 $1 \text{ } 0 \text{ } \text{SHIFT} \text{ (} \div \text{) (nCr) } 4 \text{ } \text{=}$
 $10C4$
210

#042 **MATH** **Rad**

\int_{\square} () sin ALPHA () (X) ()
 + cos ALPHA () (X) ()
) x^2 () 0 () SHIFT $x10^x$ () () ()

$$\int_0^{\pi} (\sin(X) + \cos(X)) dx$$

Math ▲

π

#043 **MATH**

5 SHIFT RCL (STO) () (A)
 ALPHA $x10^x$ (e) - SHIFT log () () ()
 1 () ALPHA () (X) SHIFT $x!$ (x!)
 () () 0 () ALPHA () (A) ()

$$e^{-\sum_{x=0}^1 \left(\frac{1}{x!}\right)}$$

Math ▲

$1.615161792 \times 10^{-3}$

1 0 SHIFT RCL (STO) () (A)
 () ()

$$e^{-\sum_{x=0}^1 \left(\frac{1}{x!}\right)}$$

Math ▲

2.731267×10^{-8}

1 5 SHIFT RCL (STO) () (A)
 () ()

$$e^{-\sum_{x=0}^1 \left(\frac{1}{x!}\right)}$$

Math ▲

0

#044 **LINE**

1 2 3 4 ()

$$1234$$

1234

ENG

$$1234$$

1.234×10^{-3}

ENG

$$1234$$

1234×10^0

#045 **LINE**

$$\boxed{1} \boxed{2} \boxed{3} \boxed{=} \quad \begin{array}{r} 123 \\ 123 \end{array}$$

$$\boxed{\text{SHIFT}} \boxed{\text{ENG}} (\leftarrow) \quad \begin{array}{r} 123 \\ 0.123 \times 10^3 \end{array}$$

$$\boxed{\text{SHIFT}} \boxed{\text{ENG}} (\leftarrow) \quad \begin{array}{r} 123 \\ 0.000123 \times 10^6 \end{array}$$

#046 **MATH**

$$\boxed{\text{SHIFT}} \boxed{\times 10^x} (\pi) \boxed{\times} \boxed{\frac{\square}{\square}} \boxed{2} \boxed{\blacktriangledown} \boxed{5} \boxed{=} \quad \begin{array}{r} \pi \times \frac{2}{5} \\ \frac{2}{5} \pi \end{array}$$

$$\boxed{\text{S}\blacktriangleright} \quad \begin{array}{r} \pi \times \frac{2}{5} \\ 1.256637061 \end{array}$$

#047 **MATH**

$$\boxed{\sqrt{\square}} \boxed{2} \boxed{\blacktriangleright} \boxed{\times} \boxed{\sqrt{\square}} \boxed{3} \boxed{=} \quad \begin{array}{r} \sqrt{2} \times \sqrt{3} \\ \sqrt{6} \end{array}$$

$$\boxed{\text{S}\blacktriangleright} \quad \begin{array}{r} \sqrt{2} \times \sqrt{3} \\ 2.449489743 \end{array}$$

#048 **LINE**

$$\boxed{(} \boxed{1} \boxed{+} \boxed{3} \boxed{i} \boxed{)} \boxed{\div} \quad \begin{array}{r} \text{CMPLX} \\ (1+3i) \div (2i) \\ 3 \downarrow 2 \\ -1 \downarrow 2i \end{array}$$

#049 **LINE** **Deg**

$1 + i \rightarrow r \angle \theta$
 [SHIFT] [2] (CMPLX) [3] ($\rightarrow r \angle \theta$) [=]

CMPLX \square \blacktriangle
 $1+i \rightarrow r \angle \theta$
 1.414213562
 $\angle 45$

#050 **MATH**

[SHIFT] [2] (CMPLX) [2] (Conjg)
 [2] [+] [3] [i] [)] [=]

CMPLX \square Math \blacktriangle
 Conjg(2+3i)
 2-3i

#051 **MATH** **Deg**

*1 [SHIFT] [hyp] (Abs) [2] [+]
 [2] [i] [=]

CMPLX \square Math \blacktriangle
 $|2+2i|$
 $2\sqrt{2}$

*2 [SHIFT] [2] (CMPLX) [1] (arg)
 [2] [+] [2] [i] [)] [=]

CMPLX \square Math \blacktriangle
 arg(2+2i)
 45

#052

$$\bar{x} = \frac{\sum x}{n}$$

$$x\sigma_n = \sqrt{\frac{\sum (x - \bar{x})^2}{n}}$$

$$x\sigma_{n-1} = \sqrt{\frac{\sum (x - \bar{x})^2}{n-1}}$$

#053

SHIFT MODE \blacktriangledown 4 (STAT) 1 (ON)
MODE 3 (STAT)

1: 1-VAR	2: A+BX
3: $-+CX^2$	4: $\ln X$
5: e^X	6: $A \cdot B^X$
7: $A \cdot X^B$	8: $1/X$

1 (1-VAR)

STAT	0
X	FREQ
1	
2	
3	

1 = 2 = 3 = 4 =
5 = 6 = 7 = 8 =
9 = 1 0 =

STAT	0
X	FREQ
9	9
10	
11	

AC

STAT	0
	0

#054

SHIFT 1 (STAT) 2 (Data)

STAT	0
X	FREQ
1	1
2	2
3	

1

SHIFT 1 (STAT) 3 (Edit) 1 (Ins)

STAT	0
X	FREQ
1	1
2	2
3	

0

\blacktriangledown \blacktriangledown \blacktriangledown \blacktriangledown \blacktriangledown \blacktriangledown \blacktriangledown \blacktriangledown DEL

STAT	0
X	FREQ
7	6
8	7
9	

9

AC

STAT	0
	0

#055

SHIFT **1** (STAT) **2** (Data) **▶**

1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0

STAT 0
% 0 1 2 3 4 5 6 7 8 9 0
FREQ 1

▼ **2** **=** **▼** **2** **=** **2** **=**
2 **=** **3** **=** **4** **=** **2** **=**

1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0

STAT 0
% 7 8 9 0
FREQ 4

AC

1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0

STAT 0

#056

SHIFT **1** (STAT) **4** (Sum)

1: Σx^2 2: Σx

1 (Σx^2) **=**

1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0

STAT 0
 Σx^2
672

SHIFT **1** (STAT) **4** (Sum)
2 (Σx) **=**

1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0

STAT 0
 Σx
102

#057

SHIFT **1** (STAT) **5** (Var)

1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0

1: n 2: \bar{x}
3: $x\sigma n$ 4: $x\sigma n-1$

1 (n) **=**

1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0
1	2	3	4	5	6	7	8	9	0

STAT 0
n
20

SHIFT **1** (STAT) **5** (Var) **2** (\bar{x}) **=**

STAT 0
 \bar{x}
5.1

SHIFT **1** (STAT) **5** (Var)
3 (σn) **=**

STAT 0
 σn
2.754995463

#058

SHIFT **1** (STAT) **6** (MinMax)

1:minX 2:maxX

1 (minX) **=**

STAT 0
minX
0

SHIFT **1** (STAT) **6** (MinMax)
2 (maxX) **=**

STAT 0
maxX
10

#059

SHIFT **1** (STAT) **7** (Distr)

1:P(2:Q(
3:R(4:▶t

1 (P()) **3** **SHIFT** **1** (STAT)
7 (Distr) **4** (▶t) **▷** **=**

STAT 0
P(3▶t)
0.22296

SHIFT **1** (STAT) **7** (Distr)
3 (R()) **7** **SHIFT** **1** (STAT)
7 (Distr) **4** (▶t) **▷** **=**

STAT 0
R(7▶t)
0.24521

#060

$$\bar{x} = \frac{\Sigma x}{n}$$

$$x\sigma_n = \sqrt{\frac{\Sigma (x - \bar{x})^2}{n}}$$

$$x\sigma_{n-1} = \sqrt{\frac{\Sigma (x - \bar{x})^2}{n-1}}$$

$$\bar{y} = \frac{\Sigma y}{n}$$

$$y\sigma_n = \sqrt{\frac{\Sigma (y - \bar{y})^2}{n}}$$

$$y\sigma_{n-1} = \sqrt{\frac{\Sigma (y - \bar{y})^2}{n-1}}$$

$$A = \frac{\Sigma y - B \cdot \Sigma x}{n}$$

$$B = \frac{n \cdot \Sigma xy - \Sigma x \cdot \Sigma y}{n \cdot \Sigma x^2 - (\Sigma x)^2}$$

$$r = \frac{n \cdot \Sigma xy - \Sigma x \cdot \Sigma y}{\sqrt{\{n \cdot \Sigma x^2 - (\Sigma x)^2\} \{n \cdot \Sigma y^2 - (\Sigma y)^2\}}}$$

$$\hat{x} = \frac{y - A}{B}$$

$$\hat{y} = A + Bx$$

#061

x	y	x	y
1.0	1.0	2.1	1.5
1.2	1.1	2.4	1.6
1.5	1.2	2.5	1.7
1.6	1.3	2.7	1.8
1.9	1.4	3.0	2.0

[SHIFT] [MODE] [▼] [4] (STAT) [2] (OFF)
 [MODE] [3] (STAT)

1: 1-VAR	2: A+BX
3: $Y=CX^2$	4: $\ln X$
5: e^X	6: $A \cdot B^X$
7: $A \cdot X^B$	8: $1/X$

[2] (A+BX) [1] [=]

STAT		0
X	Y	
1.0	1.0	
1.2	1.1	
1.5	1.2	
1.6	1.3	
1.9	1.4	

[1] [.] [2] [=] [1] [.] [5] [=]
 [1] [.] [6] [=] [1] [.] [9] [=]
 [2] [.] [1] [=] [2] [.] [4] [=]
 [2] [.] [5] [=] [2] [.] [7] [=]
 [3] [=]

STAT		0
X	Y	
1.0	1.0	
1.2	1.1	
1.5	1.2	
1.6	1.3	
1.9	1.4	
2.1	1.5	

[▼] [▶] [1] [=]

STAT		0
X	Y	
1.0	1.0	
1.2	1.1	
1.5	1.2	
1.6	1.3	
1.9	1.4	
2.1	1.5	
2.4	1.6	

[1] [.] [1] [=] [1] [.] [2] [=]
 [1] [.] [3] [=] [1] [.] [4] [=]
 [1] [.] [5] [=] [1] [.] [6] [=]
 [1] [.] [7] [=] [1] [.] [8] [=]
 [2] [=]

STAT		0
X	Y	
1.0	1.0	
1.2	1.1	
1.5	1.2	
1.6	1.3	
1.9	1.4	
2.1	1.5	
2.4	1.6	
2.5	1.7	

[AC]

STAT		0

#062**SHIFT** **1** (STAT) **4** (Sum)

1: Σx^2	2: Σx
3: Σy^2	4: Σy
5: Σxy	6: Σx^3
7: Σx^2y	8: Σx^4

5 (Σxy) **=**

STAT	0
Σxy	
	30.96

SHIFT **1** (STAT) **5** (Var)

1: n	2: \bar{x}
3: $x\sigma n$	4: $x\sigma n-1$
5: y	6: $y\sigma n$
7: $y\sigma n-1$	

3 ($x\sigma n$) **=**

STAT	0
$x\sigma n$	
	0.63

SHIFT **1** (STAT) **6** (MinMax)

1: $\min X$	2: $\max X$
3: $\min Y$	4: $\max Y$

4 ($\max Y$) **=**

STAT	0
$\max Y$	
	2

#063**SHIFT** **1** (STAT) **7** (Reg)

1: A	2: B
3: r	4: \bar{x}
5: σ	

1 (A) **=**

STAT	0
A	
	0.5043587805

SHIFT 1 (STAT) 7 (Reg)
2 (B) =

STAT 0
B
0.4802217183

SHIFT 1 (STAT) 7 (Reg) 3 (r) =

STAT 0
r
0.9952824846

#064

*1 (-) 3 SHIFT 1 (STAT)
7 (Reg) 4 (\hat{x}) =

STAT 0
-3 \hat{x}
-7.297376705

*2 2 SHIFT 1 (STAT) 7 (Reg)
5 (\hat{y}) =

STAT 0
2 \hat{y}
1.464802217

#065

$$A = \frac{\sum y}{n} - B\left(\frac{\sum x}{n}\right) - C\left(\frac{\sum x^2}{n}\right)$$

$$B = \frac{S_{xy} \cdot S_{x^2x^2} - S_{x^2y} \cdot S_{xx^2}}{S_{xx} \cdot S_{x^2x^2} - (S_{xx^2})^2}$$

$$C = \frac{S_{x^2y} \cdot S_{xx} - S_{xy} \cdot S_{xx^2}}{S_{xx} \cdot S_{x^2x^2} - (S_{xx^2})^2}$$

$$S_{xx} = \sum x^2 - \frac{(\sum x)^2}{n}$$

$$S_{xy} = \sum xy - \frac{(\sum x \cdot \sum y)}{n}$$

$$S_{xx^2} = \sum x^3 - \frac{(\sum x \cdot \sum x^2)}{n}$$

$$S_{x^2x^2} = \sum x^4 - \frac{(\sum x^2)^2}{n}$$

$$Sx^2y = \Sigma x^2y - \frac{(\Sigma x^2 \cdot \Sigma y)}{n}$$

$$\hat{x}_1 = \frac{-B + \sqrt{B^2 - 4C(A - y)}}{2C}$$

$$\hat{x}_2 = \frac{-B - \sqrt{B^2 - 4C(A - y)}}{2C}$$

$$\hat{y} = A + Bx + Cx^2$$

#066

SHIFT 1 (STAT) 1 (Type)

1: 1-VAR	2: A+BX
3: $_+CX^2$	4: 1n X
5: e^X	6: A·B^X
7: A·X^B	8: 1/X

3 ($_+CX^2$)

	STAT	0
1	X	Y
2	1.2	1.1
3	1.5	1.2

AC

	STAT	0
1		

#067

SHIFT 1 (STAT) 7 (Reg)

1: A	2: B
3: C	4: $\frac{1}{X}$
5: $\frac{1}{X^2}$	6: $\frac{1}{X^3}$

1 (A) =

	STAT	0
A		
		0.7028598638

SHIFT 1 (STAT) 7 (Reg)

2 (B) =

	STAT	0
B		
		0.2576384379

SHIFT 1 (STAT) 7 (Reg)
3 (C) =

STAT 0
C
0.05610274153

#068

$$y = 3 \rightarrow \hat{x}_1 = ?$$

3 SHIFT 1 (STAT) 7 (Reg)
4 (\hat{x}_1) =

STAT 0
3 \hat{x}_1
4.502211457

$$y = 3 \rightarrow \hat{x}_2 = ?$$

3 SHIFT 1 (STAT) 7 (Reg)
5 (\hat{x}_2) =

STAT 0
3 \hat{x}_2
-9.094472563

$$x = 2 \rightarrow \hat{y} = ?$$

2 SHIFT 1 (STAT) 7 (Reg)
6 (\hat{y}) =

STAT 0
2 \hat{y}
1.442547706

#069

$$A = \frac{\Sigma y - B \cdot \Sigma \ln x}{n}$$

$$B = \frac{n \cdot \Sigma (\ln x)y - \Sigma \ln x \cdot \Sigma y}{n \cdot \Sigma (\ln x)^2 - (\Sigma \ln x)^2}$$

$$r = \frac{n \cdot \Sigma (\ln x)y - \Sigma \ln x \cdot \Sigma y}{\sqrt{\{n \cdot \Sigma (\ln x)^2 - (\Sigma \ln x)^2\} \{n \cdot \Sigma y^2 - (\Sigma y)^2\}}}$$

$$\hat{x} = e^{\frac{y-A}{B}}$$

$$\hat{y} = A + B \ln x$$

#070

$$A = \exp\left(\frac{\sum \ln y - B \cdot \sum x}{n}\right)$$

$$B = \frac{n \cdot \sum x \ln y - \sum x \cdot \sum \ln y}{n \cdot \sum x^2 - (\sum x)^2}$$

$$r = \frac{n \cdot \sum x \ln y - \sum x \cdot \sum \ln y}{\sqrt{\{n \cdot \sum x^2 - (\sum x)^2\} \{n \cdot \sum (\ln y)^2 - (\sum \ln y)^2\}}}$$

$$\hat{x} = \frac{\ln y - \ln A}{B}$$

$$\hat{y} = A e^{Bx}$$

#071

$$A = \exp\left(\frac{\sum \ln y - B \cdot \sum x}{n}\right)$$

$$B = \exp\left(\frac{n \cdot \sum x \ln y - \sum x \cdot \sum \ln y}{n \cdot \sum x^2 - (\sum x)^2}\right)$$

$$r = \frac{n \cdot \sum x \ln y - \sum x \cdot \sum \ln y}{\sqrt{\{n \cdot \sum x^2 - (\sum x)^2\} \{n \cdot \sum (\ln y)^2 - (\sum \ln y)^2\}}}$$

$$\hat{x} = \frac{\ln y - \ln A}{\ln B}$$

$$\hat{y} = AB^x$$

#072

$$A = \exp\left(\frac{\sum \ln y - B \cdot \sum \ln x}{n}\right)$$

$$B = \frac{n \cdot \sum \ln x \ln y - \sum \ln x \cdot \sum \ln y}{n \cdot \sum (\ln x)^2 - (\sum \ln x)^2}$$

$$r = \frac{n \cdot \sum \ln x \ln y - \sum \ln x \cdot \sum \ln y}{\sqrt{\{n \cdot \sum (\ln x)^2 - (\sum \ln x)^2\} \{n \cdot \sum (\ln y)^2 - (\sum \ln y)^2\}}}$$

$$\hat{x} = e^{\frac{\ln y - \ln A}{B}}$$

$$\hat{y} = Ax^B$$

#073

$$A = \frac{\sum y - B \cdot \sum x^{-1}}{n}$$

$$B = \frac{S_{xy}}{S_{xx}}$$

$$r = \frac{S_{xy}}{\sqrt{S_{xx} \cdot S_{yy}}}$$

$$S_{xx} = \sum (x^{-1})^2 - \frac{(\sum x^{-1})^2}{n}$$

$$S_{yy} = \sum y^2 - \frac{(\sum y)^2}{n}$$

$$S_{xy} = \sum (x^{-1})y - \frac{\sum x^{-1} \cdot \sum y}{n}$$

$$\hat{x} = \frac{B}{y - A}$$

$$\hat{y} = A + \frac{B}{x}$$

#074

SHIFT **1** (STAT) **1** (Type)

1: 1-VAR	2: A+BX
3: $-+CX^2$	4: $\ln X$
5: e^X	6: $A \cdot B^X$
7: $A \cdot X^B$	8: $1/X$

4 (ln X) **AC** **SHIFT** **1** (STAT)
7 (Reg) **3** (r) **=**

STAT	0
r	
	0.9753724902

SHIFT **1** (STAT) **1** (Type)
5 (e^X) **AC** **SHIFT** **1** (STAT)
7 (Reg) **3** (r) **=**

STAT	0
r	
	0.9967116738

SHIFT **1** (STAT) **1** (Type)
6 ($A \cdot B^X$) **AC** **SHIFT** **1** (STAT)
7 (Reg) **3** (r) **=**

STAT	0
r	
	0.9967116738

SHIFT **1** (STAT) **1** (Type)
7 ($A \cdot X^B$) **AC** **SHIFT** **1** (STAT)
7 (Reg) **3** (r) **=**

STAT	0
r	
	0.9917108781

SHIFT **1** (STAT) **1** (Type)
8 (1/X) **AC** **SHIFT** **1** (STAT)
7 (Reg) **3** (r) **=**

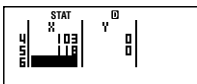
STAT	0
r	
	-0.9341328778

#075 $y = A + B \ln x$

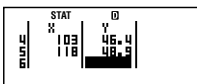
x	y
29	1.6
50	23.5
74	38.0
103	46.4
118	48.9

SHIFT MODE \blacktriangledown 4 (STAT) 2 (OFF)
 MODE 3 (STAT) 4 (ln X)

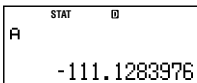
2 9 = 5 0 = 7 4 =
 1 0 3 = 1 1 8 =



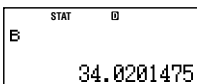
\blacktriangledown \blacktriangleright 1 . 6 =
 2 3 . 5 =
 3 8 = 4 6 . 4 =
 4 8 . 9 =



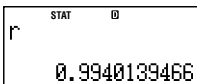
AC SHIFT 1 (STAT) 7 (Reg)
 1 (A) =



SHIFT 1 (STAT) 7 (Reg)
 2 (B) =

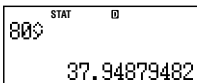


SHIFT 1 (STAT) 7 (Reg)
 3 (r) =



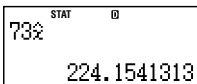
$$x = 80 \rightarrow \hat{y} = ?$$

8 0 SHIFT 1 (STAT) 7 (Reg)
 5 (\hat{y}) =



$$y = 73 \rightarrow \hat{x} = ?$$

7 3 SHIFT 1 (STAT) 7 (Reg)
 4 (\hat{x}) =



#076 $y = Ae^{Bx}$

x	y
6.9	21.4
12.9	15.7
19.8	12.1
26.7	8.5
35.1	5.2

SHIFT MODE \blacktriangledown 4 (STAT) 2 (OFF)
MODE 3 (STAT) 5 (e^X)

6 . 9 = 1 2 . 9 =
1 9 . 8 =
2 6 . 7 =
3 5 . 1 =

STAT		θ
ΣX	26.7	Y
ΣY	35.1	0
ΣXY		0

\blacktriangledown \blacktriangleright 2 1 . 4 =
1 5 . 7 =
1 2 . 1 = 8 . 5 =
5 . 2 =

STAT		θ
ΣX	26.7	Y
ΣY	35.1	8.5
ΣXY		5.2

AC SHIFT 1 (STAT) 7 (Reg) 1 (A) =

STAT		θ
A		
		30.49758743

SHIFT 1 (STAT) 7 (Reg) 2 (B) =

STAT		θ
B		
		-0.04920370831

SHIFT 1 (STAT) 7 (Reg) 3 (r) =

STAT		θ
r		
		-0.997247352

$$x = 16 \rightarrow \hat{y} = ?$$

1 6 SHIFT 1 (STAT) 7 (Reg) 5 (\hat{y}) =

STAT		θ
16 \hat{y}		
		13.87915739

$$y = 20 \rightarrow \hat{x} = ?$$

2 0 SHIFT 1 (STAT) 7 (Reg) 4 (\hat{x}) =

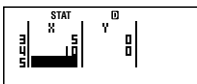
STAT		θ
20 \hat{x}		
		8.574868047

#077 $y = AB^x$

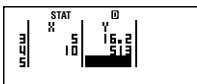
x	y
-1	0.24
3	4
5	16.2
10	513

SHIFT MODE \blacktriangledown 4 (STAT) 2 (OFF)
 MODE 3 (STAT) 6 (A•B^X)

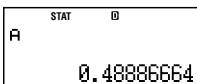
(-) 1 = 3 = 5 =
 1 0 =



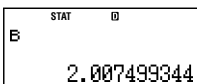
\blacktriangledown \blacktriangleright 0 . 2 4 = 4 =
 1 6 . 2 = 5 1 3 =



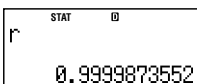
AC SHIFT 1 (STAT) 7 (Reg) R
 1 (A) =



SHIFT 1 (STAT) 7 (Reg) B
 2 (B) =

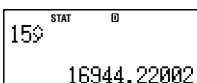


SHIFT 1 (STAT) 7 (Reg) r
 3 (r) =



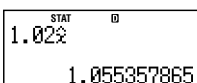
$x = 15 \rightarrow \hat{y} = ?$

1 5 SHIFT 1 (STAT) 7 (Reg) 15 \diamond
 5 (\hat{y}) =



$y = 1.02 \rightarrow \hat{x} = ?$

1 . 0 2 SHIFT 1 (STAT) 1.02 \diamond
 7 (Reg) 4 (\hat{x}) =

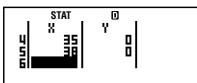


#078 $y = Ax^B$

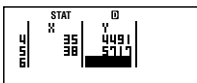
x	y
28	2410
30	3033
33	3895
35	4491
38	5717

SHIFT MODE \blacktriangledown 4 (STAT) 2 (OFF)
MODE 3 (STAT) 7 (A•X^B)

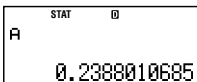
2 8 = 3 0 = 3 3 =
3 5 = 3 8 =



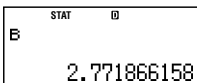
\blacktriangledown \blacktriangleright 2 4 1 0 =
3 0 3 3 =
3 8 9 5 =
4 4 9 1 =
5 7 1 7 =



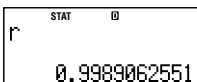
AC SHIFT 1 (STAT) 7 (Reg) A
1 (A) =



SHIFT 1 (STAT) 7 (Reg) B
2 (B) =

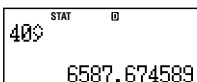


SHIFT 1 (STAT) 7 (Reg) r
3 (r) =



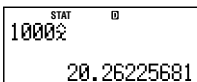
$x = 40 \rightarrow \hat{y} = ?$

4 0 SHIFT 1 (STAT) 7 (Reg) 40 \blacktriangleright
5 (\hat{y}) =



$y = 1000 \rightarrow \hat{x} = ?$

1 0 0 0 SHIFT 1 (STAT) 7 (Reg) 4 (\hat{x}) =

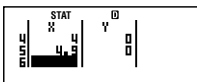


#079 $y = A + \frac{B}{x}$

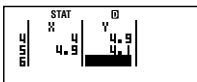
x	y
1.1	18.3
2.1	9.7
2.9	6.8
4.0	4.9
4.9	4.1

SHIFT MODE \blacktriangledown 4 (STAT) 2 (OFF)
MODE 3 (STAT) 8 (1/X)

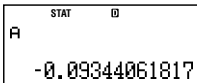
1 . 1 = 2 . 1 =
2 . 9 = 4 =
4 . 9 =



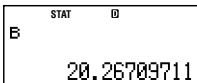
\blacktriangledown \blacktriangleright 1 8 . 3 =
9 . 7 = 6 . 8 =
4 . 9 = 4 . 1 =



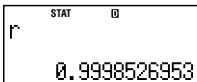
AC SHIFT 1 (STAT) 7 (Reg) 1 (A) =



SHIFT 1 (STAT) 7 (Reg) 2 (B) =

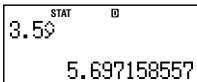


SHIFT 1 (STAT) 7 (Reg) 3 (r) =



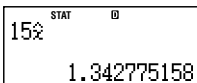
$x = 3.5 \rightarrow \hat{y} = ?$

3 . 5 SHIFT 1 (STAT) 7 (Reg) 5 (\hat{y}) =



$y = 15 \rightarrow \hat{x} = ?$

1 5 SHIFT 1 (STAT) 7 (Reg) 4 (\hat{x}) =



#080

AC BIN 1 + 1 =

1+1	▲
	Bin
0000000000000010	

#081

AC OCT 7 + 1 =

7+1	▲
	Oct
000000000010	

#082

AC HEX 1 F + 1 =

1F+1	▲
	Hex
00000020	

#083

AC DEC 3 0 =

30	▲
	Dec
30	

BIN

30	▲
	Bin
00000000000011110	

OCT

30	▲
	Oct
00000000036	

HEX

30	▲
	Hex
0000001E	

#084

AC BIN SHIFT 3 (BASE) ▼ 1 (d)
 5 + SHIFT 3 (BASE) ▼ 2 (h)
 5 =

d5+h5
 Bin
 0000000000001010

#085 1010_2 and $1100_2 = 1000_2$

1 0 1 0 SHIFT 3 (BASE)
 1 (and) 1 1 0 0 =

1010and1100
 Bin
 0000000000001000

#086 1011_2 or $11010_2 = 11011_2$

1 0 1 1 SHIFT 3 (BASE)
 2 (or) 1 1 0 1 0 =

1011or11010
 Bin
 00000000000011011

#087 1010_2 xor $1100_2 = 110_2$

1 0 1 0 SHIFT 3 (BASE)
 3 (xor) 1 1 0 0 =

1010xor1100
 Bin
 0000000000000110

#088 1111_2 xnor $101_2 = 111111111110101_2$

1 1 1 1 SHIFT 3 (BASE)
 4 (xnor) 1 0 1 =

1111xnor101
 Bin
 111111111110101

#089 Not (1010_2) = 111111111110101_2

SHIFT 3 (BASE)
 5 (Not) 1 0 1 0) =

Not(1010)
 Bin
 111111111110101

#090 Neg (101101₂) = 111111111010011₂

SHIFT 3 (BASE) 6 (Neg)
1 0 1 1 0 1) =

Neg(101101) [▲]
Bin
111111111010011

#091 MATH $\begin{cases} X + 2Y = 3 \\ 2X + 3Y = 4 \end{cases}$

MODE 5 (EQN)

1: $anX+bnY=cn$
2: $anX+bnY+CnZ=dn$
3: $aX^2+bX+c=0$
4: $aX^3+bX^2+cX+d=0$

1 (a_nX+b_nY=c_n)

1 [a b c]
2 [1 0 0]
3 [2 0 0]
4 [3 0 0]
5 [0 0 0]
6 [0 0 0]
7 [0 0 0]
8 [0 0 0]
9 [0 0 0]
0 [0 0 0]
Math
0
0
0
0
0

1 = 2 = 3 =
2 = 3 = 4 =

1 [a b c]
2 [1 2 3]
3 [2 3 4]
4 [3 4 5]
5 [4 5 6]
6 [5 6 7]
7 [6 7 8]
8 [7 8 9]
9 [8 9 0]
0 [9 0 1]
Math
0
0
0
0
0
0
0
0
0
4

=

X= ⁰ Math ▾
-1

▼

Y= ⁰ Math ▲
2

#092 MATH $X^2 + 2X + 3 = 0$

MODE 5 (EQN)

1: $anX+bnY=cn$
2: $anX+bnY+CnZ=dn$
3: $aX^2+bX+c=0$
4: $aX^3+bX^2+cX+d=0$

3 (aX²+bX+c=0)

1 [a b c]
2 [1 2 3]
3 [2 3 4]
4 [3 4 5]
5 [4 5 6]
6 [5 6 7]
7 [6 7 8]
8 [7 8 9]
9 [8 9 0]
0 [9 0 1]
Math
0
0
0
0
0
0
0
0
0
0

1 = 2 = 3 =

$$\begin{bmatrix} a & b & c \\ 1 & 2 & E \end{bmatrix}$$

3

=

$$X_1 = -1 + 1.414213562i$$

=

$$X_2 = -1 - 1.414213562i$$

#093

MATH

$$\begin{cases} X - Y + Z = 2 \\ X + Y - Z = 0 \\ -X + Y + Z = 4 \end{cases}$$

MODE 5 (EQN)

1: $a_nX + b_nY = c_n$
 2: $a_nX + b_nY + c_nZ = d_n$
 3: $aX^2 + bX + c = 0$
 4: $aX^3 + bX^2 + cX + d = 0$

2 (anX+bnY+cnZ=dn)

$$\begin{bmatrix} a & b & c & d \\ 1 & 0 & 0 & 2 \\ 1 & 0 & 0 & 0 \\ -1 & 1 & 1 & 4 \end{bmatrix}$$

1 = (-) 1 = 1 = 2 =
 1 = 1 = (-) 1 = 0 =
 (-) 1 = 1 = 1 = 4 =

$$\begin{bmatrix} b & c & d \\ 1 & -1 & 1 & 2 \\ 1 & -1 & 1 & 0 \\ 1 & 1 & 1 & 4 \end{bmatrix}$$

=

$$X = 1$$

▼

$$Y = 2$$

0 Math ▲

Z=

3

#094 **MATH** $X^3 - 2X^2 - X + 2 = 0$

MODE 5 (EQN)

- 1: $aX + bY = c$
 2: $aX + bY + cZ = d$
 3: $aX^2 + bX + c = 0$
 4: $aX^3 + bX^2 + cX + d = 0$

4 (aX³+bX²+cX+d=0)

0 Math

a b c

0

1 = (-) 2 =
 (-) 1 = 2 =

0 Math

1 b -2 c -1 d

2

0 Math▼

X₁=

-1

0 Math▼▲

X₂=

2

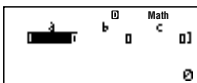
0 Math ▲

X₃=

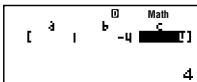
1

#095 **MATH** $X^2 - 4X + 4 = 0$

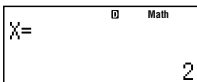
MODE **5** (EQN) **3** ($aX^2 + bX + c = 0$)



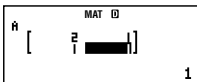
1 **=** **(-)** **4** **=** **4** **=**



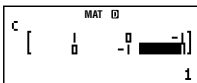
=

**#096**

MODE **6** (MATRIX)
1 (MatA) **5** (2×2)
2 **=** **1** **=** **1** **=** **1** **=**



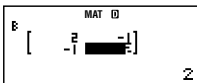
SHIFT **4** (MATRIX) **1** (Dim)
3 (MatC) **4** (2×3)
1 **=** **0** **=** **(-)** **1** **=**
0 **=** **(-)** **1** **=** **1** **=**

**#097**

SHIFT **4** (MATRIX) **2** (Data)
1 (MatA) **SHIFT** **RCL** (STO)



(-) **1** **=** **(-)** **1** **=** **2** **=**
000 (MatB) **▶**



#098

AC SHIFT 4 (MATRIX) 3 (MatA)
 + SHIFT 4 (MATRIX) 4 (MatB)

MAT 0
 MatA+MatB
 0

= MAT 0
 Ans

$$\begin{bmatrix} \blacksquare & 0 \\ \blacksquare & 3 \end{bmatrix}$$

 4

#099

SHIFT 4 (MATRIX) 3 (MatA) X
 SHIFT 4 (MATRIX) 4 (MatB)

MAT 0
 MatA×MatB
 0

= MAT 0
 Ans

$$\begin{bmatrix} \blacksquare & 0 \\ \blacksquare & 1 \end{bmatrix}$$

 3

SHIFT 4 (MATRIX) 4 (MatB) X
 SHIFT 4 (MATRIX) 3 (MatA) =
 SHIFT 4 (MATRIX) 6 (MatAns)

MAT 0
 ←MatA-MatAns
 0

= MAT 0
 Ans

$$\begin{bmatrix} \blacksquare & 1 \\ \blacksquare & 0 \end{bmatrix}$$

 0

#100

3 X SHIFT 4 (MATRIX)
 3 (MatA)

MAT 0
 3×MatA
 0

= MAT 0
 Ans

$$\begin{bmatrix} \blacksquare & 3 \\ \blacksquare & 3 \end{bmatrix}$$

 6

#101

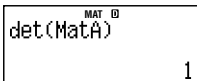
$$\det [a_{11}] = a_{11}$$

$$\det \begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix} = a_{11}a_{22} - a_{12}a_{21}$$

$$\det \begin{bmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{bmatrix}$$

$$= a_{11}a_{22}a_{33} + a_{12}a_{23}a_{31} + a_{13}a_{21}a_{32} - a_{13}a_{22}a_{31} - a_{12}a_{21}a_{33} - a_{11}a_{23}a_{32}$$

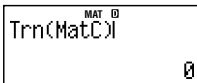
SHIFT 4 (MATRIX) 7 (det) SHIFT
4 (MATRIX) 3 (MatA)) =



MAT \square
det(MatA)
1

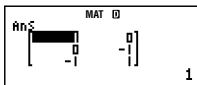
#102

SHIFT 4 (MATRIX) 8 (Trn)
SHIFT 4 (MATRIX) 5 (MatC))



MAT \square
Trn(MatC)
0

=



MAT \square
Ans
[\square | \square]
[-1 | -1]
1

#103

$$[a_{11}]^{-1} = \left[\frac{1}{a_{11}} \right]$$

$$\begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix}^{-1} = \frac{\begin{bmatrix} a_{22} & -a_{12} \\ -a_{21} & a_{11} \end{bmatrix}}{a_{11}a_{22} - a_{12}a_{21}}$$

$$\begin{bmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{bmatrix}^{-1} = \frac{\begin{bmatrix} a_{22}a_{33} - a_{23}a_{32} & -a_{12}a_{33} + a_{13}a_{32} & a_{12}a_{23} - a_{13}a_{22} \\ -a_{21}a_{33} + a_{23}a_{31} & a_{11}a_{33} - a_{13}a_{31} & -a_{11}a_{23} + a_{13}a_{21} \\ a_{21}a_{32} - a_{22}a_{31} & -a_{11}a_{32} + a_{12}a_{31} & a_{11}a_{22} - a_{12}a_{21} \end{bmatrix}}{\det \begin{bmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{bmatrix}}$$

SHIFT **4** (MATRIX) **3** (MatA) **x⁻¹**

MAT ID
MatA⁻¹
[]

=

Ans
MAT ID
[-1 -1]
[-1 2]
1

#104

SHIFT hyp (Abs) SHIFT 4 (MATRIX)
4 (MatB)]

MAT D
Abs(MatB)
0

Ans MAT D
[E 1]
1 2
2

#105

SHIFT 4 (MATRIX) 3 (MatA) x²

MAT D
MatA²
0

Ans MAT D
[E 3]
3 2
5

SHIFT 4 (MATRIX) 3 (MatA)
SHIFT x² (x³)

MAT D
MatA³
0

Ans MAT D
[E 8]
8 5
13

#106

MODE 8 (VECTOR)
1 (VctA) 2 (2) 1 = 2 =

VCT D
A [1 E]
2

AC SHIFT 5 (VECTOR) 1 (Dim)
3 (VctC) 1 (3) 2 =
(-) 1 = 2 =

VCT D
C [2 -1 E]
2

#107

AC **SHIFT** **5** (VECTOR) **2** (Data)
1 (VctA) **SHIFT** **RCL** (STO)

STO VCT0
[] 2]
1

0000 (VctB) **3** **=** **4** **=**

VCT0
[] 3 []
4

#108

AC **SHIFT** **5** (VECTOR) **3** (VctA)
+ **SHIFT** **5** (VECTOR) **4** (VctB)

VCT0
VctA+VctB
0

=

Ans VCT0
[] 6]
4

#109

3 **X** **SHIFT** **5** (VECTOR)
3 (VctA)

VCT0
3×VctA
0

=

Ans VCT0
[] F 6]
3

SHIFT **5** (VECTOR) **4** (VctB) **-**
SHIFT **5** (VECTOR) **6** (VctAns)

VCT0
VctB-VctAns
0

=

Ans VCT0
[] -2]
0

#110

$$(a_1, a_2) \cdot (b_1, b_2) = a_1b_1 + a_2b_2$$

$$(a_1, a_2, a_3) \cdot (b_1, b_2, b_3) = a_1b_1 + a_2b_2 + a_3b_3$$

SHIFT 5 (VECTOR) 3 (VctA) VctA · VctB
 SHIFT 5 (VECTOR) 7 (Dot)
 SHIFT 5 (VECTOR) 4 (VctB) = 11

#111

$$(a_1, a_2) \times (b_1, b_2) = (0, 0, a_1b_2 - a_2b_1)$$

$$(a_1, a_2, a_3) \times (b_1, b_2, b_3)$$

$$= (a_2b_3 - a_3b_2, a_3b_1 - a_1b_3, a_1b_2 - a_2b_1)$$

SHIFT 5 (VECTOR) 3 (VctA) X VctA × VctB
 SHIFT 5 (VECTOR) 4 (VctB) 0

= Ans VCTD
 [REDACTED] 0 -2] 0

#112

$$\text{Abs}(a_1, a_2) = \sqrt{a_1^2 + a_2^2}$$

$$\text{Abs}(a_1, a_2, a_3) = \sqrt{a_1^2 + a_2^2 + a_3^2}$$

SHIFT (hyp) (Abs) SHIFT 5 (VECTOR) Abs(VctC)
 5 (VctC)] = 3

#113 **Deg**

SHIFT **5** (VECTOR) **1** (Dim)
1 (VctA) **1** (3)
(-) **1** **=** **0** **=** **1** **=**

VCTD
 A [-1 0 []]
 1

AC **SHIFT** **5** (VECTOR) **1** (Dim)
2 (VctB) **1** (3)
1 **=** **2** **=** **0** **=**

VCTD
 B [1 2 []]
 0

VctA • VctB

AC **SHIFT** **5** (VECTOR) **3** (VctA)
SHIFT **5** (VECTOR) **7** (Dot)
SHIFT **5** (VECTOR) **4** (VctB) **=**

VCTD
 VctA • VctB
 -1

Ans ÷ (Abs(VctA) × Abs(VctB))

÷ **(** **SHIFT** **hyp** (Abs) **SHIFT**
5 (VECTOR) **3** (VctA) **)** **×**
SHIFT **hyp** (Abs) **SHIFT** **5** (VECTOR)
4 (VctB) **)** **)** **=**

VCTD
 Ans ÷ (Abs(VctA) × Abs(VctB))
 -0.316227766

cos⁻¹ Ans

*1 **SHIFT** **cos** (cos⁻¹) **Ans** **)** **=**

VCTD
 cos⁻¹(Ans)
 108.4349488

VctA × VctB

SHIFT **5** (VECTOR) **3** (VctA) **×**
SHIFT **5** (VECTOR) **4** (VctB) **=**

VCTD
 Ans [-1 2]
 -2

Abs(VctAns)

SHIFT **hyp** (Abs) **SHIFT** **5** (VECTOR)
6 (VctAns) **)** **=**

VCTD
 Abs(VctAns)
 3

VctAns ÷ Ans

*2 **SHIFT** **5** (VECTOR)
6 (VctAns) **÷** **Ans** **=**

VCTD
 Ans [0.3333 -0.6666]
 -0.6666666667

#114

01	mp	$1.67262158 \times 10^{-27}$ kg
02	mn	$1.67492716 \times 10^{-27}$ kg
03	me	$9.10938188 \times 10^{-31}$ kg
04	$m\mu$	$1.88353109 \times 10^{-28}$ kg
05	ao	$0.5291772083 \times 10^{-10}$ m
06	h	$6.62606876 \times 10^{-34}$ Js
07	μN	$5.05078317 \times 10^{-27}$ JT ⁻¹
08	μB	$927.400899 \times 10^{-26}$ JT ⁻¹
09	ζ_1	$1.054571596 \times 10^{-34}$ Js
10	α	$7.297352533 \times 10^{-3}$
11	re	$2.817940285 \times 10^{-15}$ m
12	λc	$2.426310215 \times 10^{-12}$ m
13	γp	2.67522212×10^8 s ⁻¹ T ⁻¹
14	λcp	$1.321409847 \times 10^{-15}$ m
15	λcn	$1.319590898 \times 10^{-15}$ m
16	R _∞	10973731.568549 m ⁻¹
17	u	$1.66053873 \times 10^{-27}$ kg
18	μp	$1.410606633 \times 10^{-26}$ JT ⁻¹
19	μe	$-928.476362 \times 10^{-26}$ JT ⁻¹
20	μn	$-0.96623640 \times 10^{-26}$ JT ⁻¹
21	$\mu\mu$	$-4.49044813 \times 10^{-26}$ JT ⁻¹
22	F	96485.3415 Cmol ⁻¹
23	e	$1.602176462 \times 10^{-19}$ C
24	NA	$6.02214199 \times 10^{23}$ mol ⁻¹
25	k	$1.3806503 \times 10^{-23}$ JK ⁻¹
26	V _m	22.413996×10^{-3} m ³ mol ⁻¹
27	R	8.314472 Jmol ⁻¹ K ⁻¹
28	C ₀	299792458 ms ⁻¹
29	C ₁	$3.74177107 \times 10^{-16}$ Wm ²
30	C ₂	1.4387752×10^{-2} mK
31	σ	5.670400×10^{-8} Wm ⁻² K ⁻⁴
32	ϵ_0	$8.854187817 \times 10^{-12}$ Fm ⁻¹
33	μ_0	$12.566370614 \times 10^{-7}$ NA ⁻²
34	ϕ_0	$2.067833636 \times 10^{-15}$ Wb

35	g	9.80665 ms ⁻²
36	G ₀	7.748091696 × 10 ⁻⁵ S
37	Z ₀	376.730313461 Ω
38	t	273.15 K
39	G	6.673 × 10 ⁻¹¹ m ³ kg ⁻¹ s ⁻²
40	atm	101325 Pa

#115 MATH

SHIFT 7 (CONST)

CONSTANT
Number 01~40?

[__]

2 8 (C₀) =

C₀

299792458

#116 MATH $c_0 = 1/\sqrt{\epsilon_0\mu_0}$

1 ÷ √□

1 ÷ √□

SHIFT 7 (CONST)

3 2 (ε₀)

1 ÷ √ε₀

SHIFT 7 (CONST)

3 3 (μ₀)

1 ÷ √ε₀μ₀

=

1 ÷ √ε₀μ₀

299792458

#117

01	in ► cm	1 [inch] = 2.54 [cm]
02	cm ► in	1 [cm] = (1/2.54) [inch]
03	ft ► m	1 [ft] = 0.3048 [m]
04	m ► ft	1 [m] = (1/0.3048) [ft]
05	yd ► m	1 [yd] = 0.9144 [m]
06	m ► yd	1 [m] = (1/0.9144) [yd]
07	mile ► km	1 [mile] = 1.609344 [km]
08	km ► mile	1 [km] = (1/1.609344) [mile]
09	n mile ► m	1 [n mile] = 1852 [m]
10	m ► n mile	1 [m] = (1/1852) [n mile]
11	acre ► m ²	1 [acre] = 4046.856 [m ²]
12	m ² ► acre	1 [m ²] = (1/4046.856) [acre]
13	gal (US) ► ℓ	1 [gal (US)] = 3.785412 [ℓ]
14	ℓ ► gal (US)	1 [ℓ] = (1/3.785412) [gal (US)]
15	gal (UK) ► ℓ	1 [gal (UK)] = 4.54609 [ℓ]
16	ℓ ► gal (UK)	1 [ℓ] = (1/4.54609) [gal (UK)]
17	pc ► km	1 [pc] = 3.085678 × 10 ¹³ [km]
18	km ► pc	1 [km] = (1/(3.085678 × 10 ¹³)) [pc]
19	km/h ► m/s	1 [km/h] = (5/18) [m/s]
20	m/s ► km/h	1 [m/s] = (18/5) [km/h]
21	oz ► g	1 [oz] = 28.34952 [g]
22	g ► oz	1 [g] = (1/28.34952) [oz]
23	lb ► kg	1 [lb] = 0.4535924 [kg]
24	kg ► lb	1 [kg] = (1/0.4535924) [lb]
25	atm ► Pa	1 [atm] = 101325 [Pa]
26	Pa ► atm	1 [Pa] = (1/101325) [atm]
27	mmHg ► Pa	1 [mmHg] = 133.3224 [Pa]
28	Pa ► mmHg	1 [Pa] = (1/133.3224) [mmHg]
29	hp ► kW	1 [hp] = 0.7457 [kW]
30	kW ► hp	1 [kW] = (1/0.7457) [hp]
31	kgf/cm ² ► Pa	1 [kgf/cm ²] = 98066.5 [Pa]
32	Pa ► kgf/cm ²	1 [Pa] = (1/98066.5) [kgf/cm ²]
33	kgf · m ► J	1 [kgf · m] = 9.80665 [J]
34	J ► kgf · m	1 [J] = (1/9.80665) [kgf · m]

35	lbf/in ² ► kPa	1 [lbf/in ²] = 6.894757 [kPa]
36	kPa ► lbf/in ²	1 [kPa] = (1/6.894757) [lbf/in ²]
37	°F ► °C	t [°F] = (t - 32)/1.8 [°C]
38	°C ► °F	t [°C] = (1.8 × t + 32) [°F]
39	J ► cal	1 [J] = (1/4.1858) [cal] *
40	cal ► J	1 [cal] = 4.1858 [J]

#118 **LINE** 5cm = ? in

5 5 | ⁰
0

SHIFT **8** (CONV) CONVERSION
Number 01~40?
[__]

0 **2** (cm►in) 5cm►in ⁰
0

= 5cm►in ⁰ ▲
1.968503937

#119 **LINE** 100g = ? oz

1 **0** **0**

100 | 0
0

SHIFT **8** (CONV)

CONVERSION
Number 01~40?
[_ _]

2 **2** (g ▶ oz)

100g▶oz | 0
0

=

100g▶oz | 0 ▲
3.527396584

#120 **LINE** -31°C = ? °F

(←) **3** **1**

-31 | 0
0

SHIFT **8** (CONV)

CONVERSION
Number 01~40?
[_ _]

3 **8** (°C ▶ °F)

-31°C▶°F | 0
0

=

-31°C▶°F | 0 ▲
-23.8

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