



# PURE MATHEMATICS

## CALCULATOR TUTORIALS FOR CASIO FX CG50

### Skill 1: Resetting your calculator

**MENU** **☰** **F5**

### Skill 2: Changing the angle unit

**SHIFT** **MENU**

Angle: **F1** **F2** **F3**

### Skill 3: Storing Values

Have value on screen

**SHIFT** **(←)** **(→)** **ALPHA**

Select letter to assign, **X,θ,T**

### Skill 4: Solving Quadratics

**MENU** **X,θ,T** **F2**

Select degree and state  $a$ ,  $b$ ,  $c$  values

**F1**

To edit/repeat: **EXIT**

### Skill 5: Solve Simultaneous Equations

- MENU** **X,θ,T** **F1**
- Select number of unknowns and state coefficients
- Solve: **F1**
- Repeat: **EXIT**

### Skill 6: Drawing Graphs

**MENU** **5**

Select Y = **F3** **F1**

Type the rest of the equation in

Draw: **F6**

### Skill 7: Adjusting the Axes

Pan Down: **▼** **▼**

Zoom in: **+**

Zoom out: **-**

Choose settings in V-Window

Choose V-window: **F3**

Enter X values:: **-** **6** **EXE** **6** **EXE**

Enter Y values: **▼** **▼** **-** **5** **EXE** **3** **EXE**

Return to the menu: **EXE**

Draw: **F6**

### Skill 8: Finding a Graphic Solution (trace and g-solve)

Draw your graph using skill 6

G-solve menu: **F5** **F6** **F6**

Root: **F1** **▶** **▶**

Maximum Point: **F5** **F2**

Minimum Point: **F5** **F3**

### Skill 9: Finding a Graphic Solution for multiple functions

Type both equations using skill 7

G-solve intersection: **F5** **F5** **▶** **▶**

### Skill 10: How to draw other graphs

Parametric graphs: **MENU** **5** **F3** **F3**

Inequalities: **MENU** **5** **F3** **F6** **F1**

Shading inequality graphs:

Type graphs in

**SHIFT** **MENU** **▼** **▼** **F1** **EXE** **F6**



### Skill 11: Graphing the Gradient Function

**MENU** **5**

Enter function

**OPTN** **F2** **F1** **F1** **1** **▶** **X,θ,T** **EXE** **F6**

### Skill 12: Conic Graphs

(including, circles, quadratics, ellipse)

**MENU** **9**

### Skill 13: Drawing Graphs with Polar Coordinates

**MENU** **5** **F3** **F2**

Type equation

Table mode settings: **MENU** **7** **F5**

Restore settings: **F3**

Modify: **F5** **▶** **▶** **▶** **▶** **▶** **MENU**

### Skill 14: Solving Trig Equations (SolveN)

**OPTN** **F4** **F5**

Type equation in including domain

ie,  $\sin 2x = 0.5, x, 0, 2\pi$

Warning may appear for many solutions,

select **EXIT**

View as decimals: **S+D**

View as a list of solutions: **▲** **EXE**

### Skill 15: Generate sequences

**MENU** **8**

Enter iterative formula

Enter settings: **F5**

Generate: **F6**

Create graph: **F4**

### Skill 16: Working with Complex numbers

**MENU** **1**

**SHIFT** **MENU**

Press **▼** 7 times

**F2** **EXE**

### Skill 17: Drawing a table

**MENU** **7**

Type the function

Choose settings: **F5**

Create and view table: **F6**

### Skill 18: The Derivative Function

First derivative: **MENU** **1** **F4** **F4**

Enter function

Second derivative: **MENU** **1** **F4** **F5**

Enter function

### Skill 19: Integration Run and Graph Modes

**MENU** **1**

**F4** **F6** **F1**

Type definite integral

Graph mode: **MENU** **5**

Enter equation and draw

**F5** **F6** **F3** **F1**

Enter upper and lower bounds

### Skill 20: Finding the Determinant of a Matrix

**MENU** **1** **F4**

Enter values

Determinant: **OPTN** **F2** **F3** **F1** **SHIFT** **(←)** **EXE**