



TI TestGuard™ App and Press-to-Test Guidebook

This guidebook was written for use with TestGuard™ App 4.2.

To obtain the latest version of the documentation, go to
education.ti.com/guides.

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TI TestGuard™

TI TestGuard™ is an application that allows educators to control a student's calculator in a testing environment. This application is for TI-83 Plus, TI-84 Plus, and TI-84 Plus C Silver Edition graphing calculators.

Educators can use the TI TestGuard™ application to:

- Delete selected data stored on students' calculators before tests.
- Disable selected data on a students' calculators before tests, including an option for all programs and selected applications.

Important! Be sure to follow the recommendations listed in the section *Before Using TI TestGuard™*.

- Restore previously disabled programs and applications on students' calculators after tests (if needed).

TI TestGuard™ Requirements

The TI TestGuard™ application is publicly available. Download the latest version of TI TestGuard™ at education.ti.com.

Important! You must install TI Connect™ on your computer before you can install TI TestGuard™ on your educator calculator. For instructions on installing TI Connect™, go to education.ti.com/software.

Hardware Requirements (for Educators)

- TI-83 Plus, TI-84 Plus, and TI-84 Plus C Silver Edition calculators.
- TI USB Connectivity Cable for Windows®/Mac® - to transfer TI TestGuard™ from your computer to your calculator.
- I/O (Input/Output) unit-to-unit cable - to transfer the calculator setup to a student's calculator.

Note: TI TestGuard™ does not run on the TI-84 Plus mode of the TI-Nspire™ handheld software.

Software Requirements (for Educators)

- 1500 bytes of free RAM on your calculator.
- For TI-83 Plus calculators - OS version 1.19.
- For TI-84 Plus calculators - OS version 2.55MP.

- For TI-84 Plus C calculators - OS version 4.2.

Note: Go to education.ti.com for the latest OS version.

Before Using TI TestGuard™

Before you use TI TestGuard™, consider the following recommendations:

- Ensure that you are using the correct operating system (OS) on your calculator. TI TestGuard™ application functions with OS version 1.19 for TI-83 Plus, with 2.55MP for TI-84 Plus, and with 4.2 for TI-84 Plus C Silver Edition calculators.
- Advise students to install the latest OS before an exam.
- Advise students that TI TestGuard™ deletes all programs and applications on a TI-83 Plus calculator. Students must backup and re-load programs and applications on the calculator using TI Connect™ or by linking to another calculator.
- Note that since the **Disable logBASE** and **summation Σ (functions** feature works only on a TI-84 Plus with OS version 2.55MP or on a TI-84 Plus C with OS version 4.0 and higher:
 - TI TestGuard™ will ignore the **DISABLE FUNC** setting and will not display an error message if you create a calculator setup to disable these functions and transfer this setup to the TI-84 Plus with OS 2.43 or earlier or the TI-83 Plus.
 - TI TestGuard™ will display an error message if you attempt to disable **logBASE** and **summation Σ (functions** for the TI-84 Plus with OS version 2.53MP. You must upgrade the OS to 2.55MP and then transfer the calculator setup.
- Ensure that the student's calculator has 2500 bytes of free RAM.

Note: If the student's calculator does not have enough free RAM, TI TestGuard™ will display a memory error. In that case, you must manually remove RAM data from the student's calculator before you can run TI TestGuard™.
- Ensure that you are in possession of both your educator calculator and the student's calculator when you transfer the calculator setup.
 - Ensure that the student's calculator is on the **Home** screen.
 - Ensure that there are no active programs on a student's calculator.

Note: A program is running if you see moving vertical lines or a circle (TI-84 Plus C) in the top right corner of the calculator. Press **[ON]** to stop any running programs. If an **ERR: BREAK** message displays, select **QUIT**.

- Ensure that the student's calculator is not in **SEND/RECEIVE** mode.

Note: A calculator is in **SEND/RECEIVE** mode if the screen displays **Waiting...**

- Note that after you transfer a calculator setup to a student's calculator and then re-enable programs, students may see programs with random names when they press **[PRGM]**. Students cannot access these programs, but can delete them by pressing **[2nd] [MEM] Mem Management/Delete**.

Accessing TI TestGuard™

To access the application, complete the following steps:

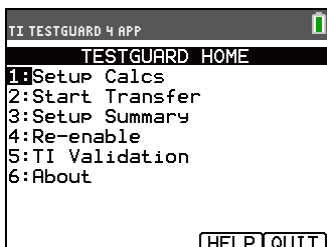
1. Press **[ON]**.
2. Press **[APPS]**.
3. Using the arrow keys, scroll down the list of applications and select **TestGrd4**. The **TESTGUARD HOME** screen displays.
4. Using the arrow or number keys, select a TI TestGuard™ menu option.

TI TestGuard™ Menu Options

When you start TI TestGuard™, the following menu options display on the **TESTGUARD HOME** screen:

- **Setup Calcs** - Allows you to configure the testing environment for a student's calculator.
- **Start Transfer** - Allows you to send the testing environment you configured to a student's calculator.
- **Setup Summary** - Allows you to view a summary of the testing environment you configured before transferring.
- **Re-enable** - Allows you to re-enable or restore functions, programs, or applications on a student's calculator that you previously disabled for an examination.

- **TI Validation**- Allows you to verify the OS currently installed on a student's calculator as valid TI software.
- **About** - Allows you to verify the version of TI TestGuard™ you are using. Always use the latest graphing calculator OS and the latest TI TestGuard™ version.



TI-84 Plus C

On-screen Menu Options

On-screen menu options display at the bottom of the screen and correspond to a calculator key.

- **TESTGUARD HOME** - Help (TRACE), Quit (GRAPH)
- **TESTGUARD 4 HELP** - Back (Y=), OK (ZOOM)
- **Setup Calcs** - Back (Y=), OK (ZOOM), Help (TRACE)
- **Setup Summary** - OK (ZOOM), Help (TRACE)

Note: You can return to a previous screen by pressing the back arrow (Y=). The back arrow does not save settings. You can only save settings by pressing **OK** (ZOOM) or **APPS** (ZOOM), depending on the screen.

SET UP CALCS Mode Options

The **SETUP CALCS** screen offers the following configuration options:

- DELETE Mode
- DISABLE Mode
- Angle and Stat Diagnostics Settings
- DISABLE FUNC Setting
- APPS TO KEEP Setting

DELETE Mode

Deletes data and applications on a student's calculator:

| | |
|----------------|---|
| ALL | (Default) Clears Apps plus Vars in RAM/Archives, leaves checked (✓) Apps. Clears Pic and Image Vars (TI-84 Plus C). |
| RAM/ARC | Clears Vars in RAM/Archives, leaves Apps. Clears Pic and Image Vars (TI-84 Plus C). |
| APPS | Clears Apps, leaves RAM/Archive and checked (✓) Apps. Leaves Pic and Image Vars (TI-84 Plus C). |

Note:

- If you select **APPS** as the **DELETE** mode setting and also disable the **logBASE** and/or **summation** $\Sigma()$ function, TI TestGuard™ changes the mode setting to **ALL**, and deletes programs. You must delete programs to prevent the calculator from retaining pre-loaded programs that contain functions or functionality not allowed on exams.

The following message displays:



DISABLE Mode

Disables locks programs or applications on a student's calculator.

| | |
|-----------------|--|
| BOTH | (Default) Disables Apps and Programs. Leaves any checked (✓) Apps. AppVars are deleted if any Apps are checked. RAM/Archive cleared. |
| PROGRAMS | Disables all user programs and usable Apps. AppVars are deleted with RAM/Archive. |
| APPS | Disables Apps. Leaves AppVars, RAM/Archive and any checked (✓) Apps. |

- If **DISABLE FUNC** is set to **CHOOSE** (default), see the “**DISABLE FUNC Setting**” section in this chapter. If **APPS TO KEEP** is set to **CHOOSE**, see the “**APPS TO KEEP Setting**” section in this chapter.
- On a student's calculator, a not-equal symbol indicates disabled programs or applications (\neq [MEM] **Mem Mgmt/Del**).

| | |
|-----------|--------|
| RAM FREE | 24252 |
| ARC FREE | 331810 |
| ≠ALG1CH5 | 32768 |
| ≠ALG1PRT1 | 65536 |
| ≠AreaForm | 16384 |
| ≠CSheetEs | 49152 |
| ≠CSheetFr | 49152 |
| ≠CabriJr | 65536 |

| | | |
|----------------------------------|--|-------|
| NORMAL FLOAT AUTO REAL DEGREE MP | | ↑ |
| TEST MODE ENABLED | | |
| RAM FREE | | 19207 |
| ARC FREE | | 2940K |
| ≠Image1 | | 22256 |
| ≠Image2 | | 22256 |
| ≠Image3 | | 22256 |
| ≠Image4 | | 22256 |
| ≠Image5 | | 22256 |
| ≠Image6 | | 22256 |
| ≠Image7 | | 22256 |
| ≠Image8 | | 22256 |

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- If you select **DISABLE**, **BOTH** and set **APPS TO KEEP** to **NONE**, AppVars are saved.

Important!

- Keep your language localization application in your calculator setup. The student calculator will default to English after TI TestGuard™ setup. You can have the student run language localizer again if desired for the exam.
- A special situation exists between the Fundamental Topics in Science (**FunSci**) and Science Tools (**SciTools**) apps. If you disable **SciTools**, but

do not disable **FunSci**, when **FunSci** calls **SciTools**, the **SciTools** app launches and thus becomes re-enabled. This situation applies only to the TI-83 Plus and to the TI-84 Plus.

- If you select **APPS** as the **DISABLE** mode setting and also disable the **logBASE** and/or **summation Σ** (function, TI TestGuard™ changes the mode setting to **BOTH**, and deletes programs. You must delete programs to prevent the calculator from retaining pre-loaded programs that contain functions or functionality not allowed on exams.

The following message displays:



Angle and Stat Diagnostics Settings

With TI TestGuard™, you can also select the **ANGLE** and **STAT DIAGNOSTICS** mode settings.

ANGLE and **STAT DIAGNOSTICS** contain the following options:

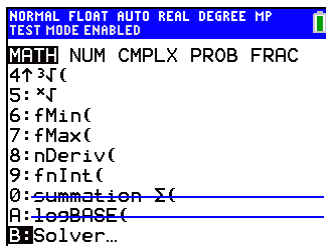
| | |
|-------------------------|--|
| ANGLE | Applies RADIAN or DEGREE (default) to a student's calculator. The student can still change this option in the calculator's MODE settings. |
| STAT DIAGNOSTICS | Allows the r and r^2 correlation coefficients with ON (default), or disallows with OFF. (This option runs the DiagnosticsOn or DiagnosticsOff command.) The student can still change this option by running the appropriate command, or by changing the mode settings. |

DISABLE FUNC Setting

You can disable the **logBASE** and **summation** Σ (functions on a student's calculator by creating a calculator setup.

Note: This only works with TI-84 Plus with OS version 2.55MP and TI-84 Plus C with OS version 4.0 and higher.

TI TestGuard™ sets **DISABLE FUNC** to **CHOOSE** by default.



TI-84 Plus C

Notes:

- If you set **DISABLE FUNC** to **CHOOSE** and **APPS TO KEEP** to **CHOOSE**, the **DISABLE FUNC** screen displays first.
From this screen:
 - a) Press **APPS** (**ZOOM**) to advance to the **YOUR APPS LIST** screen.
 - b) Select the applications you wish to keep.
 - c) Press **OK**.
- Since the **Disable logBASE** and **summation** Σ (functions feature works only on a TI-84 Plus with OS version 2.55MP or on a TI-84 Plus C with OS version 4.0 and higher:
 - TI TestGuard™ will ignore the **DISABLE FUNC** setting and will not display an error message if you create a calculator setup to disable these functions and transfer this setup to the TI-84 Plus with OS 2.43 or earlier or the TI-83 Plus.
 - TI TestGuard™ will display an error message if you attempt to disable **logBASE** and **summation** Σ (functions for the TI-84 Plus with OS version 2.53MP. You must upgrade the OS to 2.55MP and then transfer the calculator setup.

- If you select **APPS** as the **DELETE** mode setting and also disable the **logBASE** and/or **summation** $\Sigma()$ function, TI TestGuard™ changes the mode setting to **ALL**, and deletes programs. You must delete programs to prevent the calculator from retaining pre-loaded programs that contain functions or functionality not allowed on exams.

The following message displays:



If you select **APPS** as the **DISABLE** mode setting and also disable the **logBASE** and/or **summation** $\Sigma()$ function, TI TestGuard™ changes the mode setting to **BOTH**, so programs are also disabled. Programs must also be disabled to prevent the retention of pre-loaded programs containing functions or functionality not allowed on the exams.

The following message displays:



APPS TO KEEP Setting

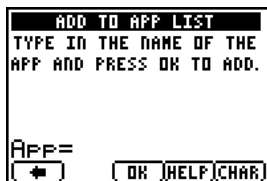
By default, TI TestGuard™ sets **APPS TO KEEP** to **NONE**. To keep certain applications on a student's calculator, complete the following steps:

- From the **SETUP CALCS** menu, set **APPS TO KEEP** to **CHOOSE**.
- Press **OK** (**ZOOM**). The **YOUR APPS LIST** screen displays:



Note:

- Catalog Help (CtlgHelp) always appears in the App list.
 - If you set **DISABLE FUNC** to **CHOOSE** and **APPS TO KEEP** to **CHOOSE**, then the **DISABLE FUNC** screen displays first. From this screen, press **APPS** (**ZOOM**) to advance to the **YOUR APPS LIST** screen.
3. From the **YOUR APPS LIST** screen, and using the arrow keys to navigate, select or unselect the functions by pressing the check mark (**GRAPH**) key.
 4. If you want to add an application to the list, press **NEW** (**WINDOW**) and the **ADD TO APP LIST** screen displays:



In this screen, enter the name of the application.

Note: You must enter the correct name of the application for TI TestGuard™ to recognize it. Press **Char** (**GRAPH**) to enter special characters.

When finished, press **OK** (**ZOOM**).

5. Press **OK** (**ZOOM**).

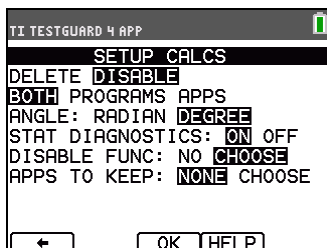
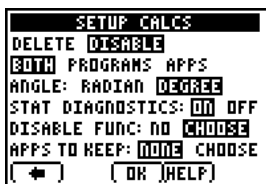
Quick Start Instructions

On your educator calculator, you can use TI TestGuard™ to setup, view, and transfer the data that students will use on their calculators for an examination.

Creating a Calculator Setup

1. Select and run the TI TestGuard™ application.
2. From the **TestGuard Home** screen, select **1: Setup Calcs**. The **SETUP CALCS** screen appears, offering configuration options.

Note: Default options are highlighted.



TI-84 Plus C

3. Use the arrow keys to make your selection(s) and then press **[ENTER]**:
 - a) **DELETE - ALL, RAM/ARC or APPS** - Select **Delete** to remove files permanently. When you delete data, RAM is reset and archived data is deleted (excluding Apps that you have specifically saved) depending on the option you have selected.
 - b) **DISABLE: BOTH, PROGRAMS or APPS** - Select **DISABLE** to remove files only temporarily, so they can be re-enabled after testing. When you disable data, programs and applications are disabled (excluding Apps that you have specifically saved) depending on the option you have selected.
 - c) **ANGLE: RADIAN or DEGREE** - Select the appropriate angle setting.
 - d) **STAT DIAGNOSTICS: ON or OFF** - Select **ON** to view the r and r_2 values in statistics.

- e) **DISABLE FUNC: NO** or **CHOOSE** - Select the default **CHOOSE** to disable the **logBASE** and/or **summation** Σ (functions.

Note: TI TestGuard™ can only disable the **logBASE** and/or **summation** Σ (functions on a student's TI-84 Plus with OS version 2.55MP and TI-84 Plus C with OS version 4.0 and higher. Students with TI-84 Plus OS 2.53MP will need to update their OS to 2.55MP if these functions need to be disabled for testing.

- f) **APPS TO KEEP: NONE** or **CHOOSE** -

- TI TestGuard™ sets **APPS TO KEEP** to **NONE** (default).
- Select **CHOOSE** to manage selected Apps for an exam on the student's calculator.

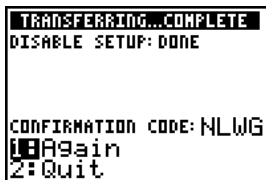
4. After completing your selections, press **OK** (**ZOOM**).

Note: See *Appendix A* for examples of testing mode setups and the results on student graphing calculators.

TI TestGuard™ saves the testing preference setup in an application variable (AppVar) named "AppList4." (This depends on what version you have. Go to education.ti.com for the latest version.) You can transfer this AppVar to another TI-83 Plus, TI-84 Plus, and TI-84 Plus C Silver Edition graphing calculators.

Start Transfer

1. Connect to a student graphing calculator, one at a time, using an I/O unit-to-unit cable.
2. On the student's calculator, press **ON** and then **CLEAR**.
3. On the educator's calculator, from the **TESTGUARD HOME** screen, select **2:Start Transfer**.
 - a) The unit displays a **TRANSFERRING...** message.
 - b) When complete, the **TRANSFERRING COMPLETE** screen displays a randomly generated password. The same password will display on the student's calculator to verify a successful process.



4. Connect to the next student's calculator, press **1:Again** to continue transfers.
5. When you are finished with transfers on all student calculators, press **2:Quit** on your educator calculator to return to the **TESTGUARD HOME** screen.

Note: The TI-84 Plus C student calculator displays a blue status bar when in **TEST MODE ENABLED**.

Setup Summary

After you have created a calculator setup, you can view a summary on your educator calculator by selecting **3:Setup Summary** from the **TESTGUARD HOME** screen.

Re-enabling Programs & Applications

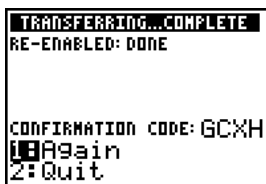
You can use TI TestGuard™ to re-enable the functions, programs and applications that you disabled in a calculator setup.

If a student needs to clear the calculator of files created during an exam, prior to doing so, see the Educator Note:

Note: You can only delete, not disable, programs and applications on TI-83 Plus calculators. Students with TI-83 Plus calculators must re-install programs and applications using TI Connect™ or by linking to another calculator.

1. Connect your educator calculator to a student's calculator with an I/O unit-to-unit cable.
2. On your educator calculator, from the **TESTGUARD HOME** screen, select **Re-enable**.

The screen clears and displays **TRANSFERRING...** When the transfer is complete, the **TRANSFERRING COMPLETE** screen displays:



```
TRANSFERRING...COMPLETE
RE-ENABLED: DONE

CONFIRMATION CODE: GCXH
A:Again
Z:Quit
```

Note: The **TRANSFERRING COMPLETE** screen displays a confirmation code on both the educator calculator and the student's calculator.

3. If you want to re-enable functions, programs, and applications on another calculator, connect another student calculator and select **Again**.
4. If you do not want to re-enable another calculator, select **Quit** to return to the **TESTGUARD HOME** screen.

Note: Students can also re-enable functions, programs, and applications by linking their calculators to another calculator, and then transfer any file (s) by pressing **[2nd] [LINK], SEND/RECEIVE**.

TI Validation

You can use TI TestGuard™ to check a particular calculator for valid software.

To validate the OS version, complete the following steps:

1. Connect your educator calculator to the student's calculator with an I/O unit-to-unit cable.
2. On your educator calculator, from the **TESTGUARD HOME** screen, select **TI Validation**. TI TestGuard™ can take up to one minute to validate a student's calculator.

When validation is complete, the **Validating TI** screen displays:

```
VALIDATING TI...COMPLETE
VALID TI: TI-84 Plus
          2.55MP

CONFIRMATION CODE: LLPB
1: Again
2: Quit
```

```
TI TESTGUARD 4 APP
VALIDATING TI...COMPLETE

VALID TI: TI-84 Plus C
          4.00

CONFIRMATION CODE: QVBF
1: Again
2: Quit
```

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Note: The screen displays a randomly-generated confirmation code. The same code displays on both the educator calculator and the student's calculator. TI TestGuard™ generates a new confirmation code each time you run TI Validation.

3. If you want to validate the operating system of another calculator, connect another student's calculator and select **Again**.
4. If you do not want to validate another calculator, select **Quit** to return to the **TESTGUARD HOME** screen.

If you receive an error message display, press **HELP** (**TRACE**) for more information. Call 1-800 TI-Cares with the error number in the display.

Note: Educators may need to have extra graphing calculators available for students for the exam, if they encounter an error for TI Validation.

Removing TI TestGuard™

To remove TI TestGuard™, complete the following steps:

1. Press **2nd** **[MEM]** to display the **MEMORY** menu.
2. Select **Mem Management/Delete**.
3. Use **▲** or **▼** to select **Apps**.
4. Use **▲** or **▼** to select **TestGrd4***.
5. Press **DEL**.
6. Select **Yes** to confirm.
7. Press **2nd** **[QUIT]** to return to the **Home** screen.

*This depends on what version you have. Go to education.ti.com for the latest version.

Using Press-to-Test

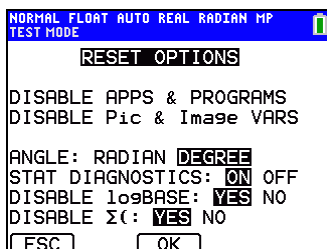
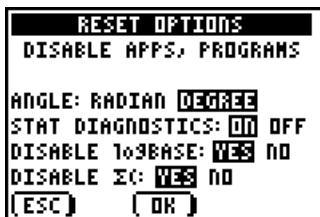
As an alternative to TI TestGuard™, Press-to-Test deletes all RAM and Archive and disables Programs, Apps, Pic Vars, and Image Vars.

You can access Press-to-Test on TI-84 Plus calculators with OS versions 2.40, 2.43, 2.53MP and 2.55MP, and the TI-84 Plus C with OS version 4.0 and higher.

Note: Press-to-Test includes fewer calculator options on TI-84 Plus with OS version 2.40, 2.43, and 2.53MP.

To use Press-to-Test on a student's calculator, complete the following steps:

1. With the TI-84 Plus or TI-84 Plus C turned **OFF**, press and hold down the right, left, and **ON** keys, and then release.
2. The **RESET OPTIONS** screen displays:

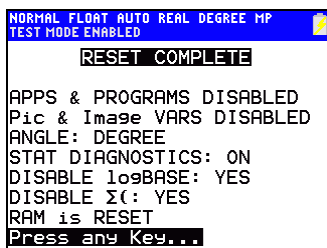


TI-84 Plus C

Notes:

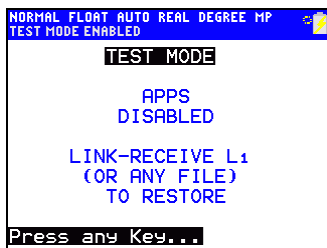
- A blue status bar is shown on the TI-84 Plus C when in **TEST MODE** and **TEST MODE ENABLED**.
- Pic & Image Vars are disabled on the TI-84 Plus C. These Vars are stored in Arc memory on the TI-84 Plus C. Vars are deleted from RAM and Arc on the TI-84 Plus and TI-83 Plus.
- By default, **ANGLE** is set to **DEGREE**, **STAT DIAGNOSTICS** is set to **ON**, and **DISABLE logBASE** and **DISABLE $\Sigma($** are set to **YES**.

- Press-to-Test can only disable the **logBASE** or **summation Σ** (functions on a student's TI-84 Plus with at least OS version 2.53MP and TI-84 Plus C with OS version 4.0 and higher.
3. If you want to change the default settings, move the cursor over the desired setting and press **ENTER**.
 4. Press **OK** (**ZOOM**). The **RESET COMPLETE** screen displays.



TI-84 Plus C

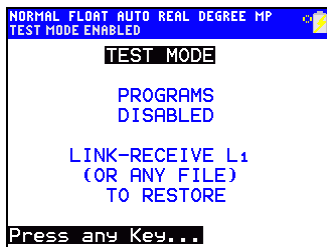
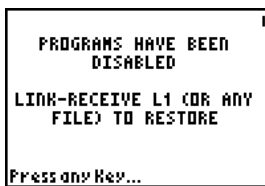
5. On the student's calculator, press **APPS** to verify that applications have been disabled. The following screen displays:



TI-84 Plus C

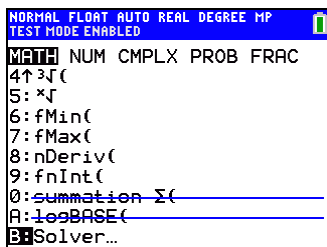
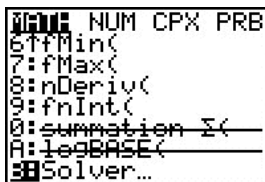
Note:

- All variables, excluding AppVars, stored in RAM and in archived memory are deleted.
6. On the student's calculator, press **PRGM** to verify that programs have been disabled. The following screen displays:



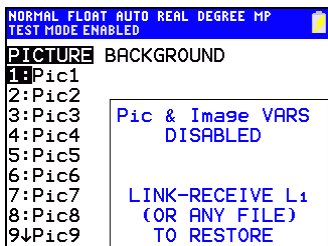
TI-84 Plus C

7. On the student's calculator, press **MATH** to verify that **logBASE** and **summation** Σ have been disabled. The following screen displays:



TI-84 Plus C

8. On the student's TI-84 Plus C calculator, Pic and Image Vars are shown as disabled.



TI-84 Plus C

9. In memory management (**2nd** **[MEM]** **Mem Mgmt/Del**), disabled files will display with the not equal sign.

| | |
|-----------|--------|
| RAM FREE | 24252 |
| ARC FREE | 331810 |
| ▶#ALG1CH5 | 32768 |
| #ALG1PRT1 | 65536 |
| #AreaForm | 16384 |
| #CSheetEs | 49152 |
| #CSheetFr | 49152 |
| #CabriJr | 65536 |

| | |
|----------------------------------|-------|
| NORMAL FLOAT AUTO REAL DEGREE MP | |
| TEST MODE ENABLED | |
| RAM FREE | 19207 |
| ARC FREE | 2940K |
| ▶#Image1 | 22256 |
| #Image2 | 22256 |
| #Image3 | 22256 |
| #Image4 | 22256 |
| #Image5 | 22256 |
| #Image6 | 22256 |
| #Image7 | 22256 |
| #Image8 | 22256 |

TI-84 Plus C

Bringing a Calculator Out of Test Mode

Educators can re-enable functions, programs, applications, Pic Vars, and Image Vars by using one of the following methods:

- Link a calculator to the student calculator, and then transfer any file(s) by pressing **[2nd] [LINK]**, **SEND/RECEIVE**.
- or-
- Send a calculator file from the computer using TI Connect™.
- or-
- Use the TI TestGuard™ App re-enable feature.

Educator Note:

If a student needs to clear the calculator of files created during an exam, use the following two-step process.

If you do not need to clear files, use step 2 below.

1. Reset calculator files.
 - a) Turn off the calculator while in Press-to-Test or testing mode.
 - b) "Re-Press-to-Test" – press and hold down the right, left, and **ON** keys, and then release.
 - c) Select **OK** when you see the **Reset Verification Screen**. The calculator is now "clean."
2. Re-enable files to turn off test mode.
 - a) Link and send a file to bring the calculator out of test mode.

Appendix A: TestGuard™ Testing Mode Setups

The following tables are examples of testing mode setups and the results on student graphing calculators.

Note: These scenarios do not contain examples of the **DISABLE FUNC** feature.

DELETE Mode Reference Tables

The following reference tables contain If/Then scenarios for **DELETE** mode on these calculators:

| Educator Calculator | Student Calculator |
|--|----------------------------------|
| TI-84 Plus C OS 4.2 Running TI TestGuard™ App v 4.2 | TI-83 Plus OS 1.19 and earlier |
| TI-84 Plus C OS 4.2 Running TI TestGuard™ App v 4.2 | TI-84 Plus OS 2.55MP and earlier |
| | TI-84 Plus C OS 4.0 and earlier |

Notes:

- If you select **APPS** as the **DELETE** mode setting and also disable the **logBASE** and/or **summation** Σ (function, TI TestGuard™ changes the mode setting to **ALL**, and deletes programs.
- TI-83 Plus and TI-84 Plus only have Pic Vars that students store in either RAM or Arc memory. TI TestGuard™ handles these as variables (as shown in the tables).
- An *exception* to tables below: TI-84 Plus C stores Images and Pic Vars in Arc memory only. TI-84 Plus C deletes these if the educator selects **DELETE ALL** or **DELETE RAM/ARC**. Otherwise, they are disabled for a convenient re-enable after the exam.

In the following tables, the “PlySmlt2” indicates that you have selected to keep one or more applications.

Delete ALL

If you delete the entire RAM/ARC, the following scenario applies:

| | Apps | Programs | RAM | AppVars | Other Archive variables | Mode Settings (except Angle/Stat Diagnostics) |
|-------------------------------------|---------|----------|---------|---------|-------------------------|---|
| 83 Plus & 84 Plus all OS, 84 Plus C | Deleted | Deleted | Deleted | Deleted | Deleted | Reset |

Delete ALL, Keep PlySmt2

If you delete the RAM, but keep PlySmt2, the following scenario applies:

| | Apps | Programs | RAM | AppVars | Other Archive variables | Mode Settings (except Angle/Stat Diagnostics) |
|-------------------------------------|-------------------------|----------|---------|---------|-------------------------|---|
| 83 Plus & 84 Plus all OS, 84 Plus C | Deleted, except PlySmt2 | Deleted | Deleted | Deleted | Deleted | Reset |

Delete RAM/ARC

If you delete the RAM/ARC, the following scenario applies:

| | Apps | Programs | RAM | AppVars | Other Archive variables | Mode Settings (except Angle/Stat Diagnostics) |
|-------------------------------------|-------|----------|---------|---------|-------------------------|---|
| 83 Plus & 84 Plus all OS, 84 Plus C | Saved | Deleted | Deleted | Deleted | Deleted | Reset |

Delete APPS (Only)

If you delete APPS (capture) only, the following scenario applies:

| | Apps | Programs | RAM | AppVars | Other Archive variables | Mode Settings (except Angle/Stat Diagnostics) |
|-------------------------------------|---------|----------|-------|---------|-------------------------|---|
| 83 Plus & 84 Plus all OS, 84 Plus C | Deleted | Saved | Saved | Saved | Saved | Maintained |

Delete APPS, Keep PlySmt2

If you delete all APPS (capture), but keep PlySmt2, the following scenario applies:

| | Apps | Programs | RAM | AppVars | Other Archive variables | Mode Settings (except Angle/Stat Diagnostics) |
|--|------------------|----------|-------|---------|-------------------------|---|
| 83 Plus & 84 Plus all OS, except 84 Plus C | Deleted, PlySmt2 | Saved | Saved | Saved | Saved | Maintained |

DISABLE Mode Reference Tables

The following reference tables contain If/Then scenarios for **DISABLE** mode on these calculators:

| Educator Calculator | Student Calculator |
|--|----------------------------------|
| TI-84 Plus C OS 4.2 Running TI TestGuard™ App v 4.2 | TI-83 Plus OS 1.19 and earlier |
| TI-84 Plus C OS 4.2 Running TI TestGuard™ App v 4.2 | TI-84 Plus OS 2.55MP and earlier |
| | TI-84 Plus C OS 4.0 and earlier |

Notes:

- The **Disable logBASE** and **summation Σ (functions** feature works on a TI-84 Plus with OS 2.55MP and the TI-84 Plus C with OS 4.0 and higher.
- If you select **APPS** as the **DISABLE** mode setting and also disable the **logBASE** and/or **summation Σ (function**, TI TestGuard™ changes the mode setting to **BOTH** and disables programs.

In the following tables, the “PlySmt2” comment indicates a situation where one or more applications are marked to be kept and not deleted or disabled.

Disable Both (Programs & APPS)

If you disable both programs and applications, the following scenario applies:

| | Apps | Programs | RAM | AppVars | Other Archive variables | Mode Settings (except Angle/Stat Diagnostics) |
|-----------------------------------|----------|----------|---------|---------|-------------------------|---|
| 83 Plus & 84 Plus, with old OS | Deleted | Deleted | Deleted | Deleted | Deleted | Reset |
| 84 Plus, with OS 2.40 - 2.55MP | Disabled | Disabled | Deleted | Saved | Deleted | Reset |
| 84 Plus C, with OS 4.0 and higher | Disabled | Disabled | Deleted | Saved | Deleted | Reset |

Disable Both (APPS & Programs), Keep PlySmt2

If you disable both applications and programs, but keep PlySmt2, the following scenario applies:

| | Apps | Programs | RAM | AppVars | Other Archive variables | Mode Settings (except Angle/Stat Diagnostics) |
|-----------------------------------|--------------------------|----------|---------|---------|-------------------------|---|
| 83 Plus & 84 Plus, with old OS | Deleted, except PlySmt2 | Deleted | Deleted | Deleted | Deleted | Reset |
| 84 Plus, with OS 2.40 - 2.55MP | Disabled, except PlySmt2 | Disabled | Deleted | Deleted | Deleted | Reset |
| 84 Plus C, with OS 4.0 and higher | Disabled, except PlySmt2 | Disabled | Deleted | Deleted | Deleted | Reset |

Disable PROGRAMS

If you disable programs only, the following scenario applies:

| | Apps | Programs | RAM | AppVars | Other Archive variables | Mode Settings (except Angle/Stat Diagnostics) |
|--------------------------------|-------|----------|---------|---------|-------------------------|---|
| 83 Plus & 84 Plus, with old OS | Saved | Deleted | Deleted | Deleted | Deleted | Reset |
| 84 Plus, with OS 2.40 - 2.55MP | Saved | Disabled | Deleted | Deleted | Deleted | Reset |

| | | | | | | |
|-----------------------------------|-------|----------|---------|---------|---------|-------|
| 84 Plus C, with OS 4.0 and higher | Saved | Disabled | Deleted | Deleted | Deleted | Reset |
|-----------------------------------|-------|----------|---------|---------|---------|-------|

Disable APPS

If you disable applications only, the following scenario applies:

| | Apps | Programs | RAM | AppVars | Other Archive variables | Mode Settings (except Angle/Stat Diagnostics) |
|-----------------------------------|----------|----------|-------|---------|-------------------------|---|
| 83 Plus & 84 Plus, with old OS | Deleted | Saved | Saved | Saved | Saved | Maintained |
| 84 Plus, with OS 2.40 - 2.55MP | Disabled | Saved | Saved | Saved | Saved | Maintained |
| 84 Plus C, with OS 4.0 and higher | Disabled | Saved | Saved | Saved | Saved | Maintained |

Disable APPS, Keep PlySmlt2

If you disable applications, but keep PlySmlt2, the following scenario applies:

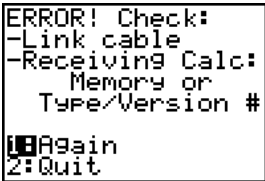
| | Apps | Programs | RAM | AppVars | Other Archive variables | Mode Settings (except Angle/Stat Diagnostics) |
|-----------------------------------|---------------------------|----------|-------|---------|-------------------------|---|
| 83 Plus & 84 Plus, with old OS | Deleted, except PlySmlt2 | Saved | Saved | Saved | Saved | Maintained |
| 84 Plus, with OS 2.40 - 2.55MP | Disabled, except PlySmlt2 | Saved | Saved | Saved | Saved | Maintained |
| 84 Plus C, with OS 4.0 and higher | Disabled, except PlySmlt2 | Saved | Saved | Saved | Saved | Maintained |

Appendix B: Troubleshooting TI TestGuard™

This section describes error messages and includes troubleshooting tips for TI TestGuard™.

- Application Errors
- Low Battery Condition
- Archive Full
- Communication Error
- Validation Error
- Checksum Error
- Other Errors

Application Errors

| Error Message | Description |
|--|---|
|  | <p>Check the following:</p> <ul style="list-style-type: none">• The student's calculator must be either a TI-83 Plus, TI-84 Plus or a TI-84 Plus C.• The I/O unit-to-unit cable must be securely attached to both the teacher's and the student's calculators. Try disconnecting the cable and reconnecting it to both units. Also, verify that you are using an I/O unit-to-unit cable and not a USB cable to connect the calculators. TI TestGuard™ does not work with USB cables.• The student's calculator must have at least 2500 bytes of free memory. If it does not, manually delete some items from RAM.• On the TI-83 Plus, TI-84 Plus and |

TI-84 Plus C, press **2nd** [MEM], then select **Mem Mgmt/Del** to display RAM FREE. You can delete items to free RAM from this screen. Select a data type (for example, **Prgm**), highlight an item to delete, and press **DEL**.

- A program named test may already be on the student's calculator. Delete the program and run TI TestGuard™ again.
-



MEM ERROR
1:Quit

This error occurs when the teacher's calculator does not have enough free RAM. It can occur during TI TestGuard™ setup or upon an attempt to run TI TestGuard™ to clear a calculator.

To correct the problem:

- Quit TI TestGuard™ .
 - Delete or archive items from your calculator's memory until you have at least 1500 bytes free.
 - Start TI TestGuard™ and continue setup or clearing calculators.
-



ERR:UNDEFINED
1:Quit
2:Goto

This error only occurs on a student's calculator if TI TestGuard™ is set to delete or disable Apps. It is seen only by students with a TI-83 Plus calculator.

The student has pressed **ENTER** after getting the Done message when TI TestGuard™ finishes running. The graphing calculator is designed to run the last program in memory when **ENTER** is pressed. However, the

program that executes is no longer on the student's calculator.

To clear the error:

- Select **Quit** to return to the TI TestGuard™ **Calculator Clear** screen.
 - Press any number, a series of numbers, or enter an equation.
 - Press **ENTER**.
-

Low Battery Condition

A low battery condition is shown on the **Home** screen. If the low-battery message appears on the calculator, do not attempt a Flash download. If you receive this error while installing an application, change the batteries and try again. You can also try charging the battery.

Archive Full

This error occurs when the TI-83 Plus, TI-84 Plus or TI-84 Plus C graphing calculator does not have sufficient memory for the application. To create space, you must delete an application and/or archived variables from the calculator. Before deleting an application from the calculator, you can back it up to a computer by using TI Connect™. Once saved, you can reload it to the calculator later using TI Connect™.

Communication Error

This error indicates the Flash™ installer is unable to communicate with the TI-83 Plus, TI-84 Plus or the TI-84 Plus C graphing calculator. The problem is usually associated with the cable and its connection to the calculator and/or to the computer. Make sure the cable is firmly pushed in to the calculator and the computer. If this does not correct the problem, try a different cable and reboot your computer. If you continue to get this error, please contact education.ti.com/support for assistance.

Validation Error

This error occurs if electrical interference caused a link to fail when you loaded an application onto your calculator. Try to install the application again. If you continue to receive this error, go to [education.ti.com/support for more information](http://education.ti.com/support-for-more-information).

Note: This error is not associated with the TI Validation check in TI TestGuard™.

Checksum Error

The Flash™ installer was not able to verify that an application was fully installed. Exit the installer and try to install the application again. If this problem persists, go to [education.ti.com/support for more information](http://education.ti.com/support-for-more-information).

Other Errors

See the TI-83 Plus, TI-84 Plus or TI-84 Plus C graphing calculator Guidebook. Visit education.ti.com/go/download for more information.

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