

TI-83 Plus

What Is My Angle?

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What Is the “What Is My Angle?” Application?

What Is My Angle? is a Handheld Software Application (App) for the TI-83 Plus that lets students practice visually recognizing and estimating geometric angles in many different scenes and contexts. What Is My Angle? makes geometry more relevant to students by illustrating angles found in the world around them. The App presents this activity in a fun, engaging game format.

The What Is My Angle? application is a concept application that TI wants to share with our customers, educators, and students before the product definition and testing are complete. It is an alpha software version, and as such, it may contain imperfections, or the coding may be incomplete.

TI invites your feedback concerning the functionality and educational value of the What Is My Angle? application. Please send your comments and questions to concept@list.ti.com.

What You Need

Note In this guidebook, any information that pertains to the TI-83 Plus also pertains to the TI-83 Plus Silver Edition, unless otherwise noted.

| Hardware and software | Notes |
|--|---|
| TI-83 Plus or TI-83 Plus Silver Edition with version 1.14 or higher of the operating system software | You can download a free copy of the latest operating system software from education.ti.com/softwareupdates . Follow the link to Operating Systems. |
| Computer with Microsoft® Windows® 95/98/2000, Windows NT®, or Apple® Mac® OS 7.1 or higher installed | |
| TI-GRAPH LINK™ computer-to-calculator cable | If you do not have this cable, call your distributor, or order the cable from TI's online store . |
| TI™ Connect software, which works with all supported models of Flash-based TI graphing calculators. —or— TI-GRAPH LINK software that is compatible with the TI-83 Plus | You can download free copies of TI Connect and TI-GRAPH LINK software from education.ti.com/softwareupdates . Follow the link to Connectivity Software. |

Where to Find Installation Instructions

Detailed instructions on installing this and other applications are available at education.ti.com/guides. Follow the link to Flash installation instructions.

Note

The instructions in this guidebook are only for this App. If you need help using the TI-83 Plus, refer to its comprehensive guidebook at education.ti.com/guides.

Starting and Quitting the Application

Starting the Application

1. Press **[APPS]** to display the list of applications on your calculator.
2. Select **WhatAngl**. The application's information screen is displayed.
3. Press any key to continue. The programmer's screen is displayed.
4. Press any key to continue. The application's main menu is displayed.

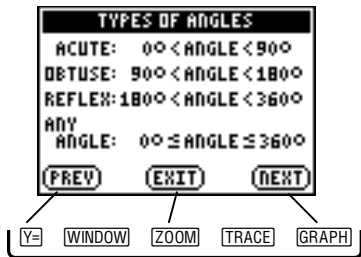
Quitting the Application

1. From an activity screen, press **[2nd] [QUIT]** to stop play.
2. Press **[2nd] [QUIT]** again to return to the main menu.
3. From the main menu, press **[2nd] [QUIT]** once more, or select **EXIT** by pressing the **[GRAPH]** key.

Getting Help

From the main menu, select **HELP** by pressing the $\boxed{Y=}$ key.

The help screens provide an overview of the types of angles you can choose, how to input your guesses, and how the game is scored.



- To go to the previous page, select **PREV** by pressing the $\boxed{Y=}$ key.
- To go to the next page, select **NEXT** by pressing the $\boxed{\text{GRAPH}}$ key.
- To quit **HELP**, select **EXIT** by pressing the $\boxed{\text{ZOOM}}$ key, or press $\boxed{2\text{nd}} \boxed{\text{[QUIT]}}$.

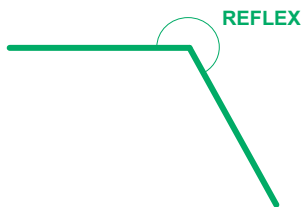
Using the Application

The Main Menu



The main menu presents a choice of four different angle types. Choose the type of angle you want the game to include in the scenes it creates and presents.

| Angle Type | Range of Angles Presented |
|------------|---|
| Acute | Greater than 0° , less than 90° |
| Obtuse | Greater than 90° , less than 180° |
| Reflex | Greater than 180° , less than 360° |
| Any Angle | Greater than or equal to 0° , less than or equal to 360° , including the right angle (90°) and the straight angle (180°). |



The game generates only angles that are a multiple of 5. The angles are depicted in many different scenes from everyday life.

To make a choice from the menu, press the corresponding number key, or press or to highlight your selection and then press .

Guessing the Angle

After selecting an angle type from the main menu, the first scene begins.



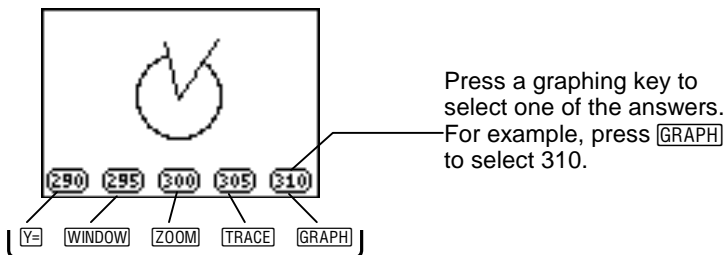
Two rays with a common endpoint (vertex) are drawn. Then an arc is traced from one ray to the other. This is the angle you must measure. The question WHAT IS MY ANGLE? is displayed, followed by a cursor.

1. Input your answer using the number keys. If you want to make a change to the numbers you input, press **[DEL]** to backspace. When you are done, press **[ENTER]**.
2. If your guess is correct, the word **CORRECT!** appears.



Press any key to proceed to the next problem.

If your guess is incorrect, the words GUESS AGAIN! appear briefly. Then a multiple-choice menu is displayed at the bottom of the screen.



3. Select an answer from this menu by pressing the corresponding graphing key under each choice.

If you choose correctly, the word CORRECT! appears. Otherwise, the words SORRY, THE ANSWER WAS... appears, and the correct answer is highlighted in the multiple-choice menu.

4. Press any key to proceed to the next problem.

Tip

To check your guesses or to measure angles more precisely, try placing a protractor on top of the display.

Scoring

After ten problems, a score is displayed along with a congratulatory message based on the score.



If you press $\boxed{2\text{nd}}$ [QUIT] to leave the activity before you have completed ten problems, the score you have achieved up to that point is displayed.

The score is tallied in the following way:

- Guessing correctly on the first try: 10 points.
- Guessing correctly on the second try: 5 points.
- Incorrect answer: 0 points.

After the score is displayed, press any key to return to the main menu.

Deleting the Application from Your Calculator

1. Press $\boxed{2\text{nd}}$ $\boxed{[\text{MEM}]}$ to display the MEMORY menu.
2. Select **Mem Mgmt/Del**.
3. Select **Apps**.
4. Move the cursor to **WhatAngl**.
5. Press $\boxed{[\text{DEL}]}$. A confirmation message is displayed.
6. Select **Yes** to delete the application.

Installation Error Messages

Low Battery

Do not attempt to download a Flash application if the low-battery message appears on the home screen. Low battery indication is shown on the initial screen. If you receive this error during an installation, change the batteries before trying again.

Invalid Signature or Certificate

Either this calculator does not have a certificate to run the application, or electrical interference caused a link to fail. Try to install the application again.

Error in Xmit

This problem is usually associated with the unit-to-unit cable and its connection between the calculators. Make sure the cable is firmly inserted in the link port of each calculator.

Link Transmission Error

This error indicates that the TI™ Connect or TI-GRAPH LINK™ software is unable to communicate with the calculator. The problem is usually associated with the TI-GRAPH LINK cable and its connection to the calculator or to the computer.

- Make sure the cable is firmly inserted in the calculator's link port and the computer's serial or USB port.
- Verify that the correct cable type is selected in the software link settings.
- Verify that the correct communications port (Com Port) is selected in the software link settings. (This step does not apply if you are using the USB port and TI Connect software).

Archive Full

This error occurs when the TI-83 Plus does not have sufficient memory for the application. In order to make room for another application, you must delete an application or archived variables from the TI-83 Plus. Before you delete an application from the TI-83 Plus, you can save it on your computer using TI™ Connect or TI-GRAPH LINK™ software for the TI-83 Plus. You can reload it to the TI-83 Plus later using the TI Connect or TI-GRAPH LINK software.

Other Errors

See pages B-6 through B-10 in the [TI-83 Plus Graphing Calculator Guidebook](#) for information about the specific error.

Checking Version Numbers and Free Space

Verify Operating System Version and ID Number

The What Is My Angle? App is compatible with the TI-83 Plus operating system 1.14 and higher.

To verify your operating system version number:

1. From the home screen, press $\boxed{2\text{nd}}$ [MEM].
2. Select **ABOUT**.

The operating system version number is displayed below the product name and has the format x.yy. The ID number appears on the line below the product number.

Verify Flash Application Version

The version number appears on the information screen below the application name. To display the information screen, do one of the following:

- Press **[APPS]**, and then select **WhatAngl**.

—or—

- Select **INFO** from the application's main menu.

Check Amount of Flash Application Free Space

1. From the home screen, press **[2nd]** **[MEM]**.
2. Select **Mem Mgmt/Del**.

The What Is My Angle? App requires at least 16,384 bytes of **ARC FREE** (Flash), or one space, to load the application.

For more information about memory and memory management, refer to the [TI-83 Plus Graphing Calculator Guidebook](#).

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