TI-Nspire™ CX Handheld

TI-Nspire™ CX Navigator™ System

Using the Quick Poll Tool

Exchanging Documents with Students

Using the Review and Portfolio Workspaces

Aggregation of Data

The Press-to-Test Feature

Frequently Asked Questions and Equipment Tips

Overview of the TI-Nspire CX Handheld

The TI-Nspire keypad consists of three sections:

① Navigation keys

② Numeric keys

③ Alphabetic keys

① The Navigation section includes an easy-glide Touchpad that operates like a computer mouse. Use the center area as you would a laptop touchpad. Use the outer edges as right, left, up, and down arrows.

Key Name	Function
Click	Selects an object.
	ctrl Click grabs an object.
esc Escape	Removes menus or dialog boxes.
Scratchpad	Provides a temporary Calculator or Graph page
tab Tab	Moves to the next entry field.
on Home	Displays the Home screen.
doc Documents	Controls the document structure.
menu Menu	Displays the application or context menu.

② The Numeric section includes toggle keys for various operations. Using $\boxed{\text{ctrl}}$ provides access to the function or character shown above each key. For example, $\boxed{\text{ctrl}}\boxed{\text{📖}}$ will open the menu of symbols. In this case, the degree symbol is highlighted. If the cursor is located just after the number 30 in the parentheses (on the Calculator page), pressing $\boxed{\text{enter}}$ will insert the degree symbol into this command.

Note: Pressing $\boxed{\text{ctrl}}$ also enables shortcuts in combination with other keys.

③ The Alphabetic section also includes keys with other characters. The keys with the ▶ symbol will also display menus. For example, pressing $\boxed{\text{?!▶}}$ brings up the menu with the most common symbols. Try the $\boxed{\text{π▶}}$ key as well.
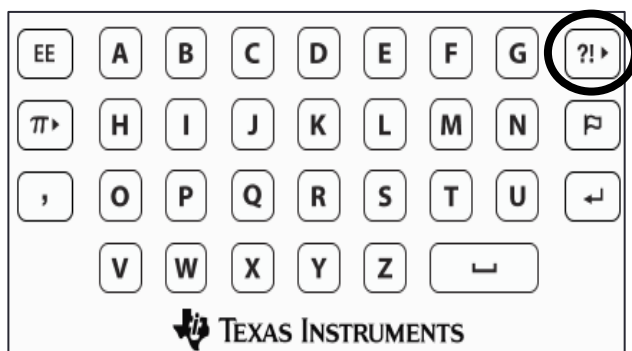
Basic Functionality of the TI-Nspire CX Handheld

The Home Screen

Turn on your TI-Nspire CX handheld. If the screen shown to the right is not displayed, press ⌂on for **Home**. The Home screen provides a starting point for all activities on your handheld.

Use the Touchpad to select any of the Scratchpad or Documents options or any of the application icons (in color). Or, press the arrows on the Touchpad (◄, ►, ▲, or ▼) to move among the options.
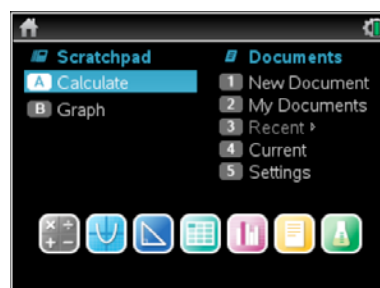
Use the Home screen to perform the following tasks:

- Create new documents.
- Open and managing existing documents.
- Open the Scratchpad for quick calculations and graphing.
- Define settings and viewing status.
- View hints for operating the handheld.
- See a list of recent documents.
- Return to the current document.

The Scratchpad

The Scratchpad allows you to make quick calculations and graphs without affecting your current document. You can open a Scratchpad window with a Calculator page or a Graphs page. The contents of the Scratchpad can then be discarded or saved to the current document or a new document.

Menu	Purpose
Calculator	Opens the Scratchpad with a Calculator page active.
Graph	Opens the Scratchpad with a Graph page active.

TI-Nspire™ Documents

The TI-Nspire™ handheld is "*document based"* and *"menu driven".* This means that, much like you are used to seeing on a computer, tasks must be done in a TI-Nspire *document*, and the tools for every application can be found in its *menus*.

Menu	Purpose
Home	Commands include New Document, My Documents, Recent, Current, and Settings. To access the following items from the Home screen, press [tab] (or the arrow keys on the Touchpad) then 🖳, or press the relevant number.
New Document	Opens a new document with a selection of applications.
My Documents	Opens the document browser.
Recent	View a list of the five most recent documents.
Current	Click here to go to the document that is currently open.
Settings	Use this to change the language, the document settings, the setup of the handheld, and the current status. If the TI-Nspire™ Navigator™ system is being used, students can log-in to the class and choose the network, if necessary.

TI-Nspire documents can be shared with other handheld users and those using the computer software.

- Each document is divided into at least one, and up to 30, problem(s).

- Each problem contains at least one, and up to 50, page(s).

- Each page can be divided into as many as four work areas.

- Each work area can contain any built-in TI-Nspire™ application (Calculator, Graphs, Geometry, Lists & Spreadsheet, Data & Statistics, Notes, and Vernier® DataQuest™).

TI-Nspire™ documents consist of built-in applications that can provide an interactive, dynamic mathematics environment. The TI-Nspire Home screen includes icons for the Calculator, Graphs, Geometry, Lists & Spreadsheet, Data & Statistics, Notes, and Vernier® DataQuest™ applications.

To create a new document from the Home screen, click an application icon to begin the new document with the selected application. To add a new page in a current document, press ⌈ctrl⌉ ⌈doc▾⌉ and select one of the following applications.

TI-Nspire Application	Purpose
Calculator	Adds a new Calculator page.
Graphs	Adds a new Graphs page.
Geometry	Adds a new Geometry page.
Lists & Spreadsheets	Adds a new Lists & Spreadsheet page.
Data & Statistics	Adds a new Data & Statistics page.
Notes	Adds a new Notes page.
Vernier DataQuest	Adds a new Vernier DataQuest page.

TI-Nspire™ Applications

The Calculator Application

The Calculator application is used for operations with numbers, solving equations, performing statistics calculations, defining variables and functions, etc. The following examples illustrate some of the Calculator capabilities of the TI-Nspire™ handheld.

Create a new document by pressing [⌂ on] and select New Document. To select a Menu option, highlight the option and press [enter] or [🖱]. Alternately, press the number key for that option.

1. In the image to the right, Page 1.1 is the Calculator application. Add a Calculator page by selecting **Add Calculator**.

2. Determine the GCD and LCM of two numbers 18 and 48.

   • For the GCD, select **Menu > Number > Greatest Common Divisor.**

   • For the LCM, select **Menu > Number > Least Common Multiple.**
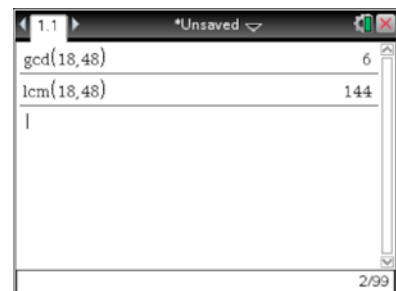
3. Find exact and approximated values of $\dfrac{1}{2} + \dfrac{2}{3}$.

   • To enter a fraction, type the division key or use the fraction template by pressing [ctrl] [÷].

   • For an approximate value, press [ctrl] [enter].
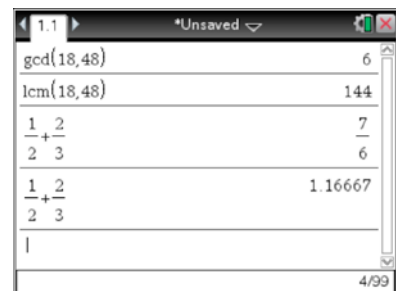
Note: If the decimal approximation is different than what is shown, go to the Home screen, select Settings, and check that the Calculation Mode is set to **Auto**.

4. Rewrite $\dfrac{11}{9}$ as a proper fraction in simplest form.

    - For proper fractions, select **Menu > Number > Fraction Tools > Proper Fraction.**

5. Factor 240.

    - To factor a number, select **Menu > Number > Factor.**

6. Verify the following statements:

    - Three-fourths is greater than two-thirds.

    - $\dfrac{1}{2}$ and $\dfrac{3}{6}$ are equivalent fractions.

    - -7 > -6

    - $(-3)^2 = -3^2$

Note: To type an equal sign, press $\boxed{=}$. To type a greater than sign, press $\boxed{\text{ctrl}}\boxed{=}$ and select >.

Note: To clear the calculator screen, select **Menu > Actions > Clear History.**

The Graphs Application

The Graphs application provides a coordinate plane where you can plot graphs of functions, scatter plots, or construct various geometric objects. You can measure coordinates of points, find areas, lengths, and angle measures, and determine equations of lines. Work through an example of plotting a line given the equation and then manipulating the line using translation and rotation.

1. In the image to the right, Page 1.2 is the Graphs application. Add a new Graphs page by selecting **Document > Insert > Graphs**. Alternately, press ⌈ctrl⌉ ⌈doc▾⌉ and select **Graphs**.

2. The function notation *f1*(*x*) is shown in the entry line. To graph *f1*(*x*) = *x,* type x in the entry line.

Note: The **Entry Line** is hidden after the graph appears. To recall the Entry line, press ⌈ctrl⌉ ⌈G⌉. To edit a function, recall the Entry line and edit the expression. You can also double-click the equation showing on the screen and edit that expression.

Note: When the Entry Line is hidden, an additional function can be graphed by pressing ⌈tab⌉ and entering an expression.

3. Move the pointer close to the graph of a function, and one of two different types of cursors will appear.

    *   The *curved arrows* ↻ rotate the graph. Notice the word *graph* also appears.

    *   The *four-directional arrow* ⊹ translates the graph.
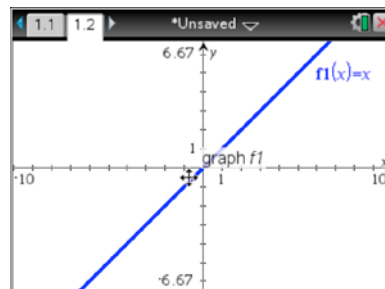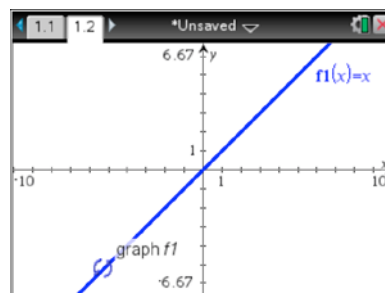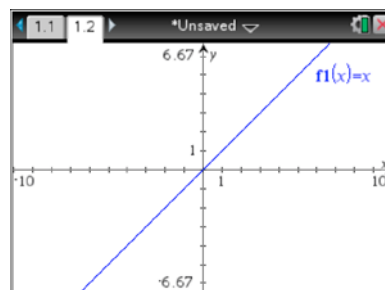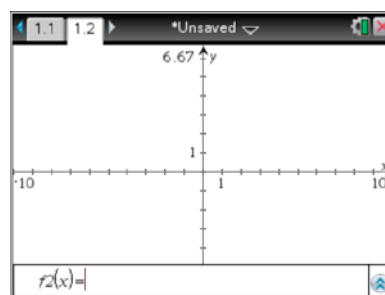
4. Place the pointer near the graph until the curved arrows appear.

   - Press ⌈ctrl⌉⌈✎⌉, and use the Touchpad arrow keys to rotate the graph.
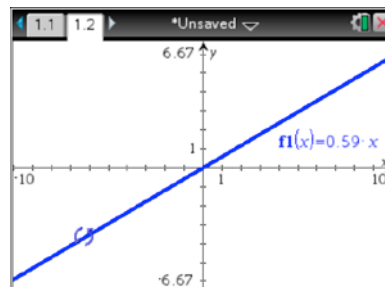
5. Place the pointer near the graph until the four-directional arrow appears.

   - Press ⌈ctrl⌉⌈✎⌉, and use the Touchpad arrow keys to translate the function.
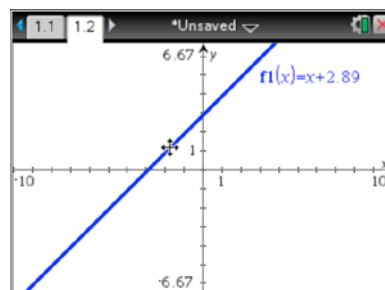
6. Vertical lines and equations in slop-intercept or standard form can also be graphed. Select **Menu > Graph Entry/Edit > Equation > Line > x=c**. Graph the line $x = 2$.
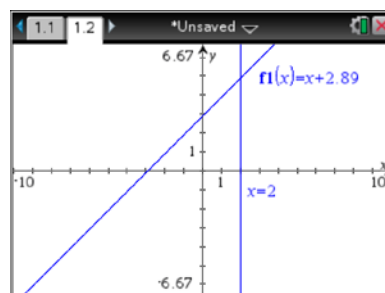
7. A dot or lined grid can also be added to the coordinate plane. To add a lined grid, select **Menu > View > Grid > Lined Grid**.

   - To remove the grid, select **Menu > View > Grid > No Grid**.
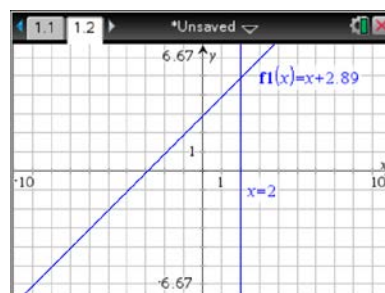
The Geometry Application

The Geometry application provides a plane that preserves 1:1 ratio of distances in vertical and horizontal directions. You can construct shapes, perform transformations, and measure geometric objects.

1. In the image to the right, Page 1.3 is the Geometry application. Add a new Geometry page by pressing [ctrl] [doc▾] and selecting **Geometry**.

2. Construct a triangle by selecting **Menu > Shapes > Triangle**.

   • Move the cursor to the desired location, and press [🖑] to mark a point. Press [⇧shift] [A] to label this as Point *A*. Mark and label Points *B* and *C* in this fashion.

   • Exit the Triangle tool by pressing [esc].
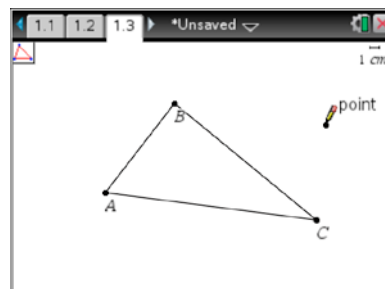
3. Measure the angles by selecting **Menu > Measurement > Angle**.

   • Click three points to define the angle. Therefore, to measure ∠A, click ∠B, then ∠A, then ∠C. The vertices can be selected in either a clockwise or counter-clockwise direction.

   • Repeat to measure the other two angles. Exit the angle tool by pressing [esc].
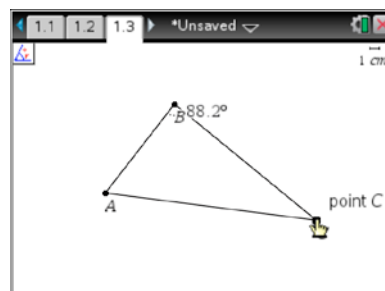
4. Drag the vertices and observe the angle measures.

   • Move the cursor over Point *A*, and the text "Point *A*" will appear. Press [ctrl] [🖑] to grab the point, and use the Touchpad to drag the point around the screen.

   • Since other objects are near Point *A*, other text might appear (such as "triangle *ABC*," "circle arc," "label," or "text"). To grab Point *A*, press [tab] until the the text "Point *A*" appears. To let go of a point, press [esc].
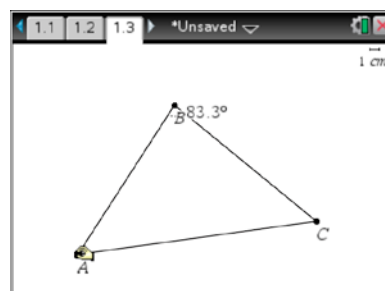
The Lists & Spreadsheet Application

The Lists & Spreadsheet application allows you to enter various types of data in order to explore relationships, patterns, and distributions. Statistical calculations can find algebraic relationships in the data. In the examples below, you will create a univariate set of random integers.

1. In the image to the right, Page 1.4 is a Lists & Spreadsheet application. Add a new Lists & Spreadsheet page by pressing `ctrl` `doc▾` and selecting **Lists & Spreadsheet**.
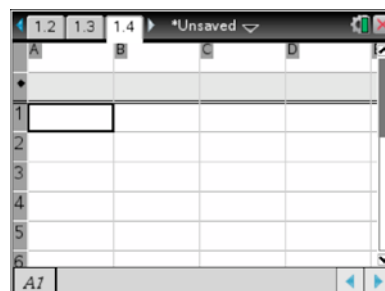
2. Generate 25 random integers between 40 and 100 in Column A of the spreadsheet.

   - Use the Touchpad to highlight the top cell of Column A, and type the name **d1** for this column of data. The name will be italicized until `enter` is pressed.

3. To generate a set of 25 random numbers, move the cursor to the shaded row marked by ◆, and press `enter`.

4. Type the formula for this column: **=randint(40,100,25**), and press `enter`.

   - This will generate 25 random integers between 40 and 100 in Column A and store them into the variable **d1.**
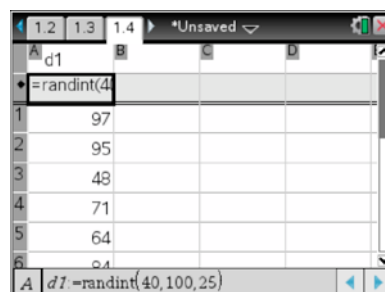
The Data & Statistics Application

Use the Data & Statistics application to create various graphical representations of data sets. As an example, you will construct box plot and histogram for the set of data generated on the Lists & Spreadsheet page above.

1. In the image to the right, Page 1.5 is a Data & Statistics application. Add a new Data & Statistics page by pressing `ctrl` `doc▾` and selecting **Data & Statistics**. A random set of points that correspond to the set of data in list **d1**.

2. To add the variable **d1** to the plot, move cursor to the bottom of the page where it says "Click to add variable." Press `enter`, select **d1**, and press `enter` again.

Note: By default, a dot plot is displayed. In order to change the plot type, select **Menu > Plot Type**, and select the desired type.

3. To create a box plot, select **Menu > Plot Type > Box Plot**.

4. To change the color, move the cursor inside the box plot, press `ctrl` `menu`, and select **Color**. Choose a color from the palette.

Note: Generate new set of random integers on the previous page and observe changes in the box plot.

5. To create a histogram, select **Menu > Plot Type > Box Plot**.

Note: Explore histograms for different sets of data.
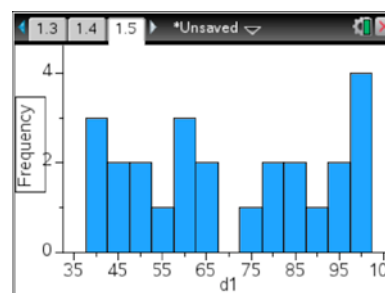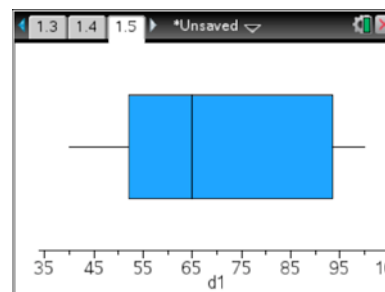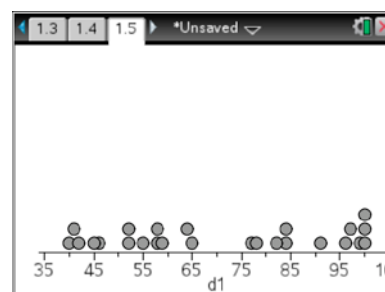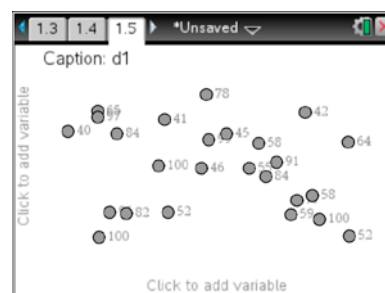
The Notes Application

The Notes application can be used to create pages with rich text. In addition to taking notes, writing directions, or asking questions, you can also use templates and interactive Math Boxes to perform calculations and define functions or variables.

1. In the image to the right, Page 1.6 is a Notes applicaiton. Add a new Notes page by pressing [ctrl] [doc▾] and selecting **Notes**.

2. Type the phrase **Evaluating Expressions** in bold text by selecting **Menu > Format > Format text...** Highlight the bold option by pressing [tab] until a box appears around the **B**. Press [enter], and then close the window by pressing [esc].

Note: To change the text color, select **Menu > Format > Text color** and choose a color from the palette.

3. Using the interactive features of Math Boxes, you can define functions and variables that will update dynamically. Insert a Math Box by selecting **Menu > Insert > Math Box**.

Note: Shortcuts for various commands appear in parentheses in the menu. The shortcut for creating a Math Box is [ctrl] [M].

4. In the Math Box, type the following formula and press [enter].

   f(x):=2x+1

Note: To get the assignment character, press [ctrl] [▣{₿].
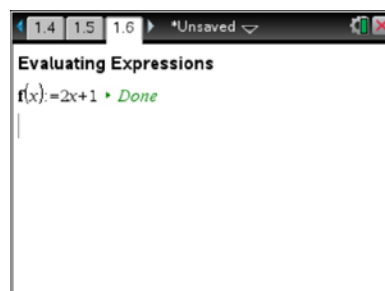
5. Evaluate the expression when *x*=1 by inserting a Math Box, typing **f(1)**, and pressing `enter`. Once the expression is evaluated, an additioal Math Box automatically appears.

    *   Change the original expression by pressing ▲ until it is highlighted. Change the function, press `enter`, and observe what happens then the original expression is changed.
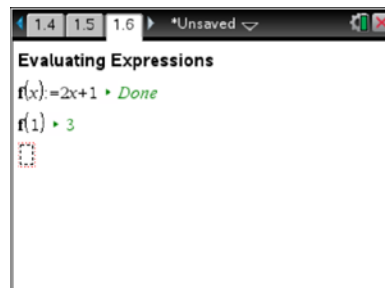
The Vernier DataQuest™ Application

A Vernier DataQuest page allows data to be collected and analyzed using sensors or probes connected to the TI-Nspire™ handheld.

1. In the image to the right, Page 1.7 is a Vernier DataQuest application. Add a new DataQuest page by pressing `ctrl` `doc ▾` and selecting **Vernier DataQuest**.

    *   This page can be inserted or, when a sensor is attached to the TI-Nspire handheld, the page will automatically launch with the appropriate units for the attached sensor.

Note: If available, a TI-Nspire™ Lab Cradle can slide onto the handheld to support data collection with multiple sensors.
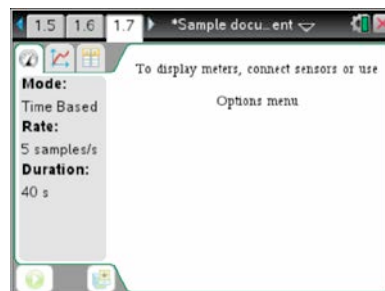
Getting Started with the TI-Nspire CX Navigator System

TI-Nspire CX Navigator System Set-Up Guide

The TI-Nspire Navigator System is not a piece of equipment that can be unpacked and used immediately in your classroom. There are a few things that need to be done before it is brought into the classroom.

Note: For detailed steps for the set-up of the TI-Nspire Navigator System, see the TI-Nspire Navigator Installation Guide that comes with the system (also available at education.ti.com). Should you need any assistance with setup, troubleshooting the system, or advice on using the software, call the TI-Navigator support line, 1-866-TI-NAVIGATOR (1-866-846-2844).

Begin by making sure all the necessary hardware is ready for the set-up process. Unpack the boxes and ensure that you have received all the pieces of hardware.

Classroom Kit	1 TI-Nspire™ CX Navigator™ Access Point 1 power adaptor (includes power supply and power cord) 1 USB computer cable 1 CD containing system and application software - The TI-Nspire™ Reference Guide
Student Kit **(10 students each)**	1 TI-Nspire™ CX Docking Station with 10 slots for TI-Nspire™ CX handhelds 1 power adaptor (includes power supply and power cord) 1 USB computer cable 10 TI-Nspire™ CX Navigator™ Wireless Network Adaptors - Storage case for the wireless network adaptors
Additional Equipment needed	- A classroom set of TI-Nspire CX handhelds. - A PC or Mac® with appropriate operating system. You must have administrator privileges in order to install the software. - A computer projection device, such as an LCD projector

Charge the Handhelds

The TI-Nspire™ CX handhelds contain rechargeable batteries. For their first use, they should be charged overnight. If their power level is depleted, they should be charged for 12 hours. The network adaptors are powered by the handheld and do not need to be charged.

Manage Software

After the TI-Nspire™ Navigator™ Teacher Software is installed, open the software, run the Network Manager, and add the wireless clients to your system. In the Network Manager, name your network so that students can distinguish your system from others in the same area (such as your room number). You might be prompted to update the firmware on your access point when you run Network Manager.
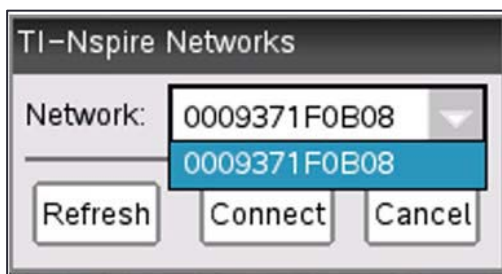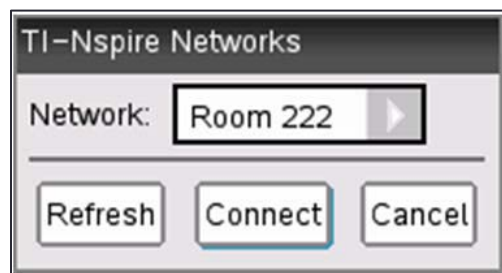
TI-Nspire™ Navigator™ Teacher Software Home Screen

When the TI-Nspire Navigator Teacher Software is launched, the Welcome Screen shown below will appear. A variety of actions can be performed by clicking on icons on the Welcome Screen.

For example, a list of documents that were recently used in the Teacher Software is available. Clicking on a document name will launch that document in the Documents Workspace of the Teacher Software.

Note: Removing the check from the box in the lower left corner will prevent this screen from appearing in future launches.

Workspaces in the TI-Nspire™ Navigator™ Teacher Software

There are five tabs at the top of the Teacher Software – Content, Class, Documents, Review, and Portfolio. Each tab represents a workspace. A general description of each workspace is given below.

The Content Workspace

The Content Workspace displays the local content on your computer, along with links for various Texas Instruments websites. In the Resources panel, go to Web Content and click **Math Nspired**. The Content pane toolbar contains cascading fields for Subject, Topic, and Category.
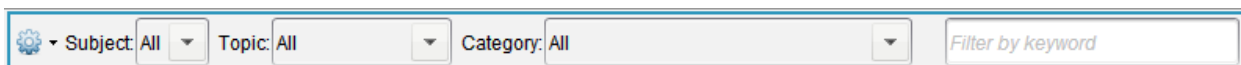
In the screen below, the teacher is browsing for Algebra 1 content.
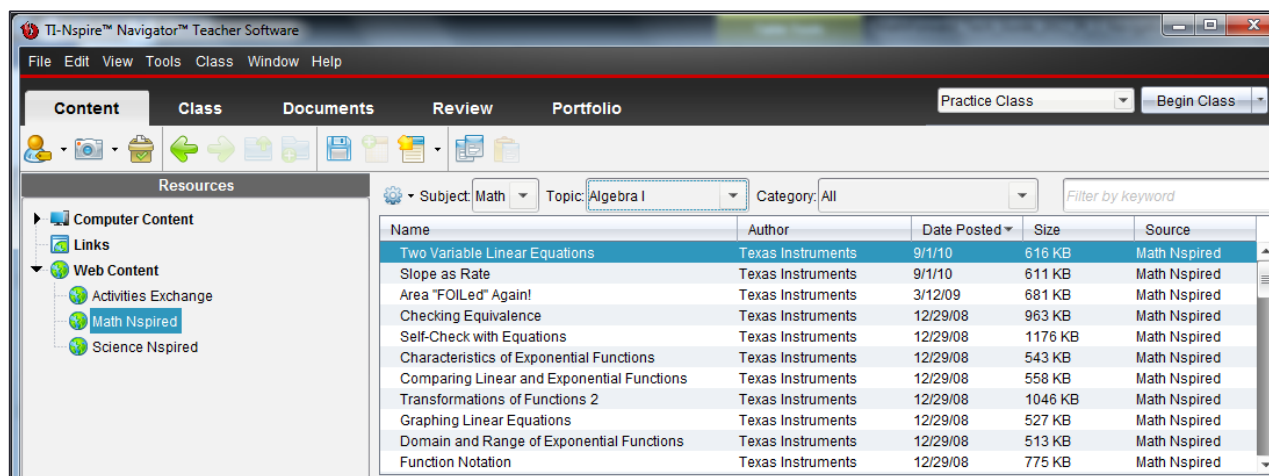
Once a lesson is located, details about the activity appear in the Preview pane. The activity may appear as a lesson bundle, which consists of multiple files and can contain multiple file types.

The Class Workspace

The Class Workspace allows the teacher to see which students are logged in to the classroom network and which documents have been transferred. The Classroom pane on the right side shows that there are five students in this class. The class has been started and students can log in using their handhelds.
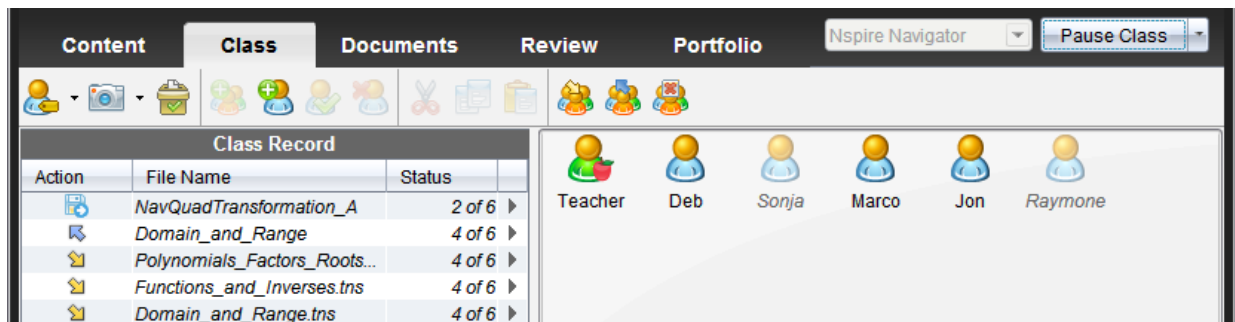
The Documents Workspace

The Documents Workspace is used to create new TI-Nspire™ documents and to edit or view pre-created documents. The Documents Toolbox on the left contains tabs for the Document Tools menu, the Page Sorter, the TI-SmartView emulator (shown below), Utilities, and the Content Explorer.
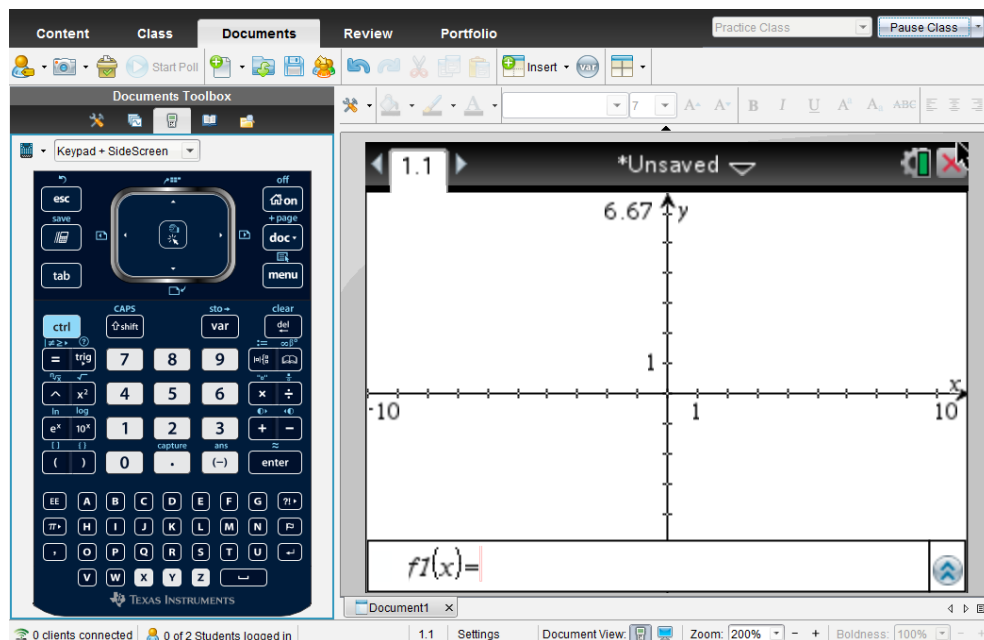
The Review Workspace

The Review Workspace allows the teacher to analyze the results of a Quick Poll or a TI-Nspire™ question document that has been collected using the TI-Nspire™ Navigator™ System.
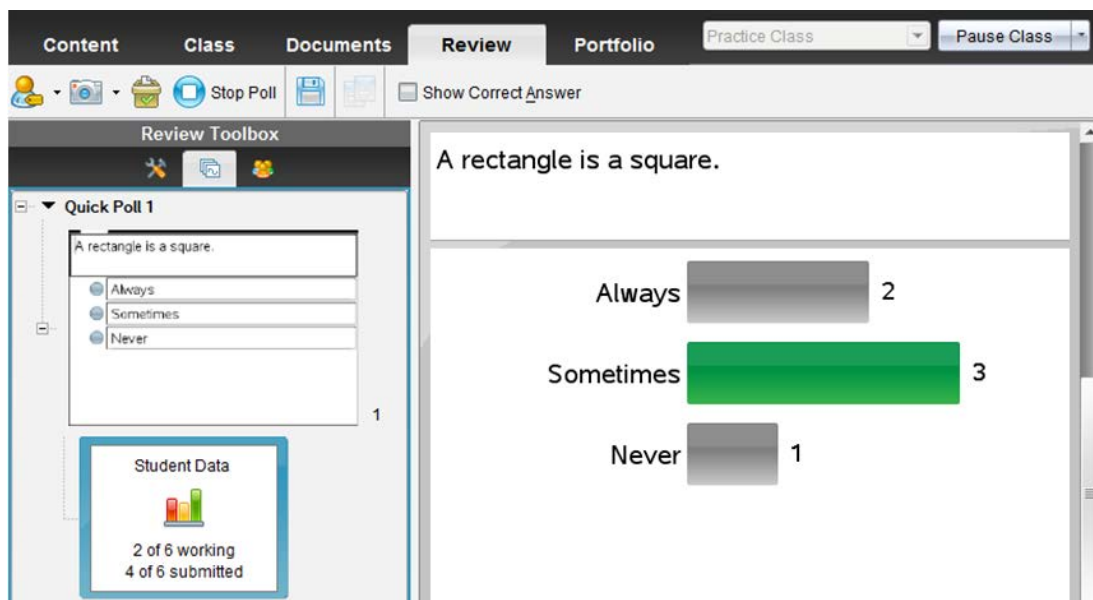
The Portfolio Workspace

The Portfolio Workspace is used to view previously saved Quick Polls and TI-Nspire document results. The teacher can view the summary of scores by student, by question, and by class.

Top Features of the Documents Workspace

The Documents Workspace has many features that can benefit teachers and students. Several features are highlighted on the following pages.

The Built-in TI-SmartView™ Emulator

A resizable handheld view – with a Keypad, SideScreen, or both - models the TI-Nspire™ with Clickpad, the TI-Nspire™ with Touchpad, or the TI-Nspire™ CX handheld. The emulator's features integrate well with interactive whiteboards and digital projectors.

1. Multiple documents can be opened in the Documents Workspace. When multiple documents are open, some can be in Handheld mode and others in Computer mode.
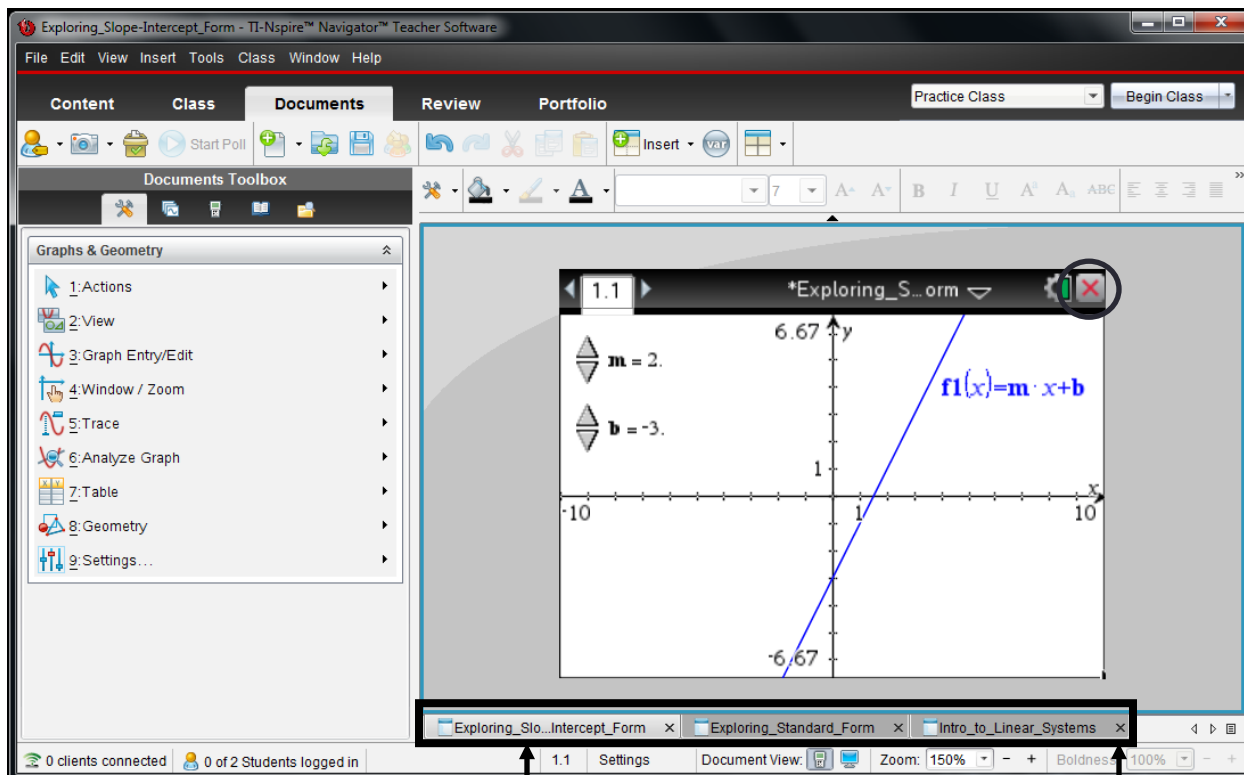
- Click on tabs at the bottom of the page to move to a different document
- A document can be closed by clicking on the ☒ on the handheld page or on the document tab.
- Pressing **ctrl** and **w** simultaneously on the computer keyboard will close documents. You might be prompted to save the revised document.

2. In the Status bar the bottom of the Documents Workspace, there is convenient access to Settings, Document View, and Zoom.
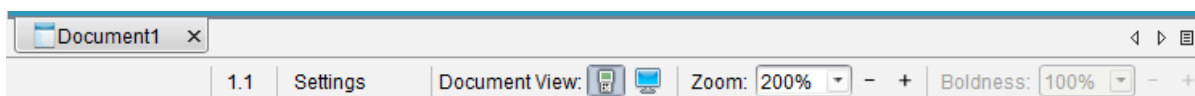
3. The Documents Toolbox contains tools needed for working with TI-Nspire™ documents. Click on the tabs to view each panel.

- The 🛠 Document Tools displays menus for the current application.

- The 🗔 Page Sorter displays thumbnail sketches of each page in the document.

- The 📱 SmartView™ emulator displays the handheld as shown earlier.

- The 📖 Utilities tab displays templates, symbols, the catalog, math operators and libraries.

- The 📂 Content Explorer allows communication with a connected handheld. Documents can be moved between the computer and the handheld by dragging them from one location to another.
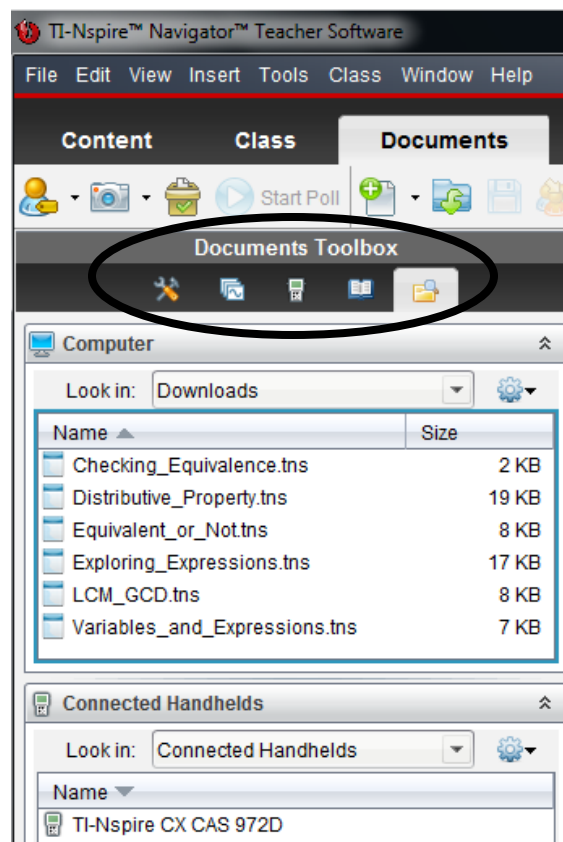
4. Images can be inserted into Graphs, Geometry, Data & Statistics, Notes, and Question applications. To insert an image, select Insert > Image and browse for an image on your computer.

- A selection of images is preloaded in the **My Documents > TI-Nspire > Images** folder. If you have images of your own, you can also browse your directory to insert those images.

Note: All jpg, jpeg, bmp, and png images are supported. The optimal format is jpeg 560 x 240. Larger images may take the document longer to load on the handheld.
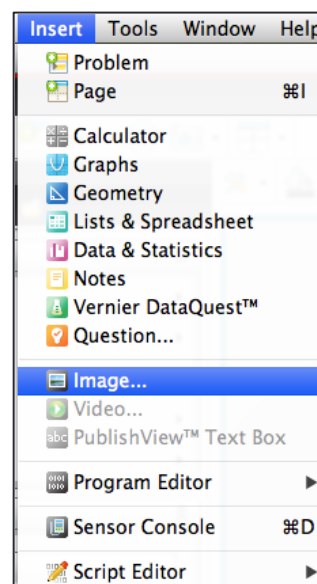
5. Double-click on Settings to open the Document Settings dialog box. The Document Settings can also be viewed by going to **File > Settings > Document Settings**.

    *   To move across fields, press [tab]. To change the setting in a given field, press ▼, elect the desired setting, and press [tab] to move to the next field. To exit the window, press [enter].
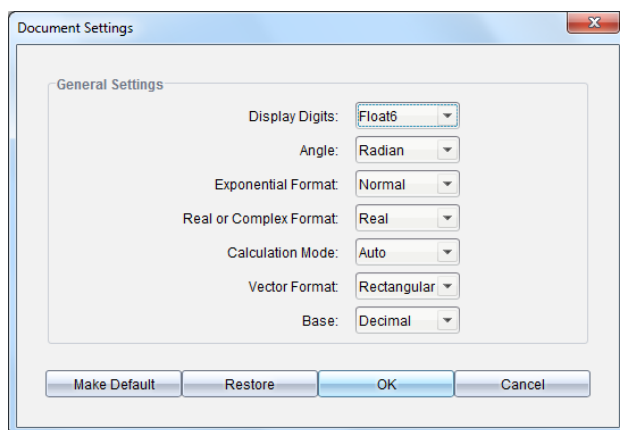
6. Color is available to enhance the visual learning of mathematics. In the image below, the page consists of a List & Spreadsheet application on the left, and two Data & Statistics applications on the right. Since the page is in Computer mode, the resolution is higher than it is on the handheld.

    *   To change the color of the plot, right-click a portion of it, select **Color > Fill Color**, and choose a color from the palette.

 TI MathForward™ Program
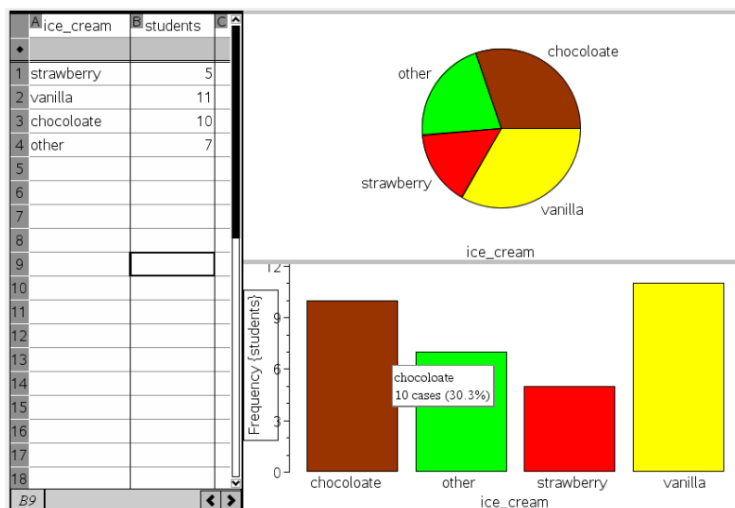
Transferring the Latest Operating System (OS) to Handhelds

The Transfer Tool provides the ability to update the operating system and send documents to all connected handhelds.

1. In the TI-Nspire™ Navigator™ Teacher Software, select **Tools > Transfer Tool**.

    Note: There must be no class in session in order for the Transfer Tool to work.
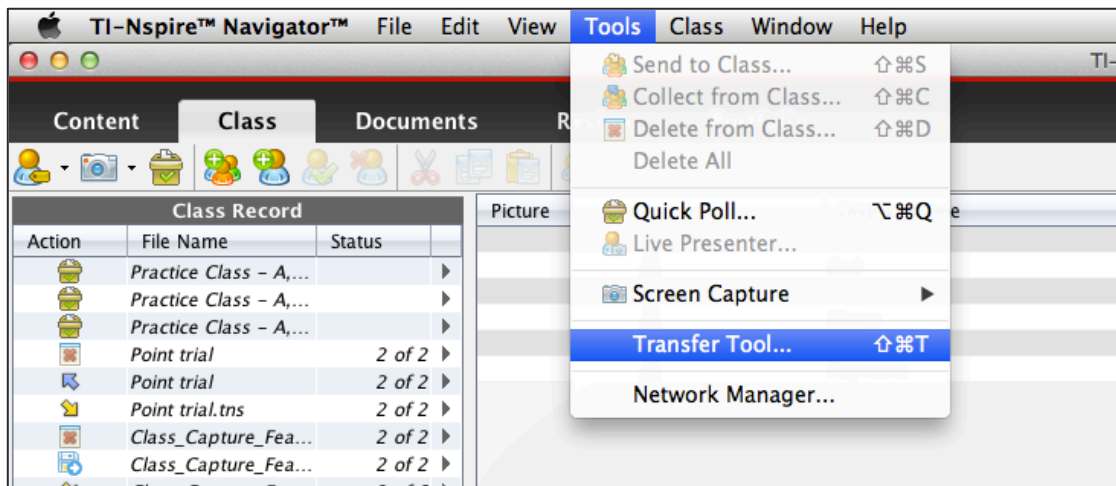
2. Click **Add to Transfer List**, and browse for the OS document on your computer.
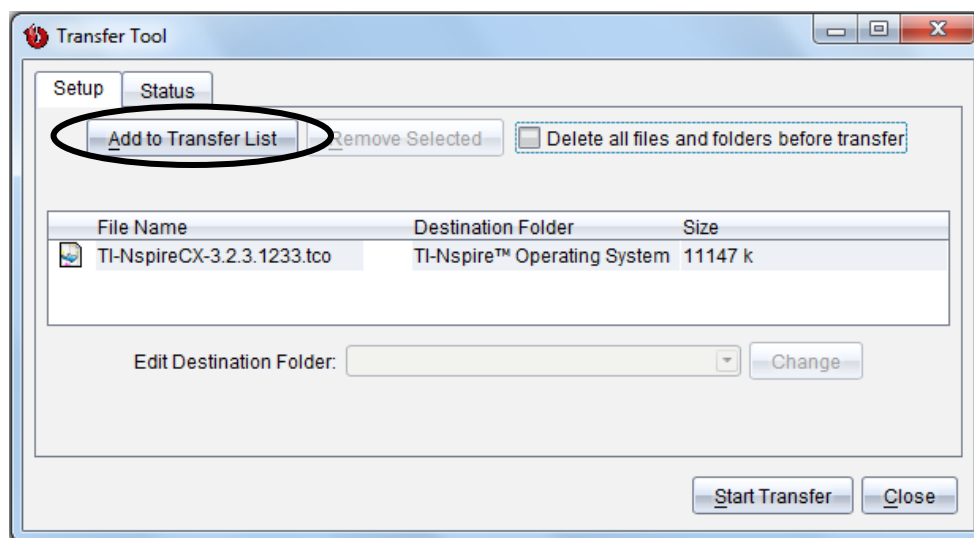
3. Click **Start Transfer**.

    - You will see the transfer window with the status of the transfer.

    - The Status tab will indicate the OS being transferred to individual calculators and the status of the transfer on each handheld.

4. When all handhelds are done, click **Stop Transfer** and **Close**.

Note: If you do not have the current OS document, visit the Texas Instruments website (education.ti.com) to download the latest OS. Select Downloads > Apps, Software & Updates. Follow the windows to find the OS that you need for your handhelds.
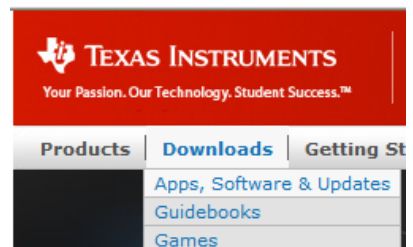
Managing Classes and Accounts

The TI-Nspire Navigator System contains a teacher account, along with student accounts for one or more classes. Each student must have an account to access the TI-Nspire Navigator System on a handheld.

Creating and Managing the Teacher Account

Before students log into the TI-Nspire Navigator System, set up your Teacher Account.

1. To manage the Teacher Account, go to the Class Workspace and select **Menu > Settings > Teacher Preferences**.
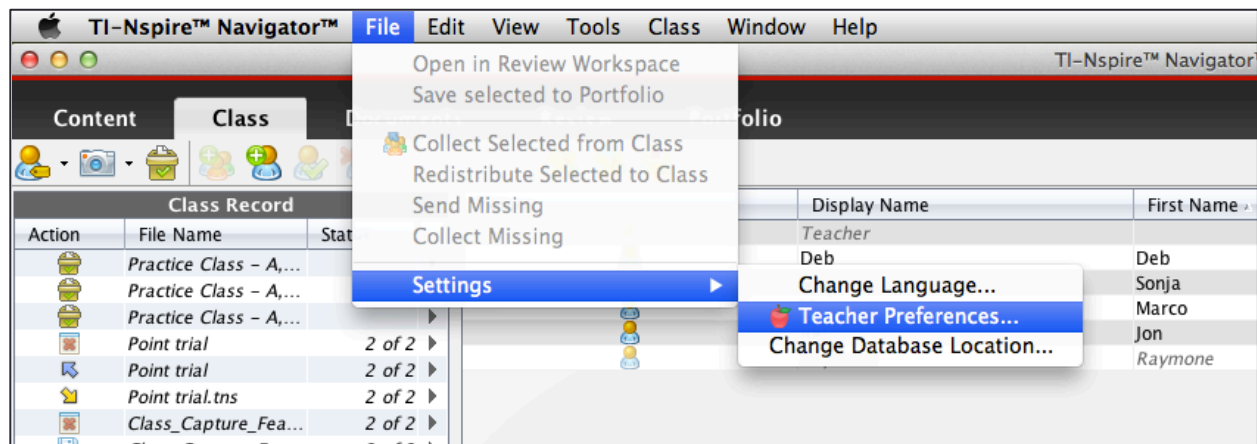
2. A teacher preference dialog box will open. Enter your user name and password.

3. Some teachers prefer the Teacher icon to appear in the classroom view. If that is desired, click on the checkbox for "Add teacher to classroom view".
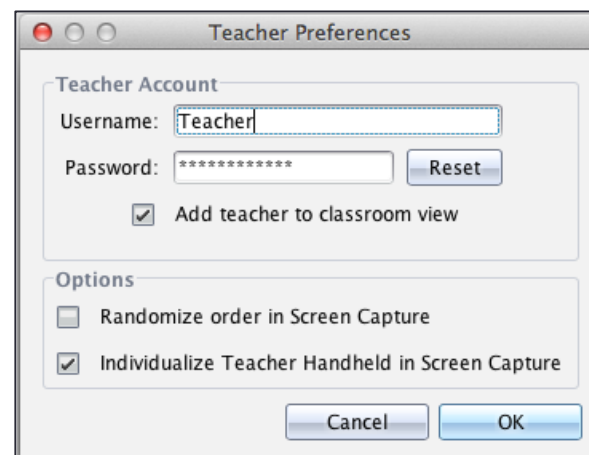
Creating and Managing Classes
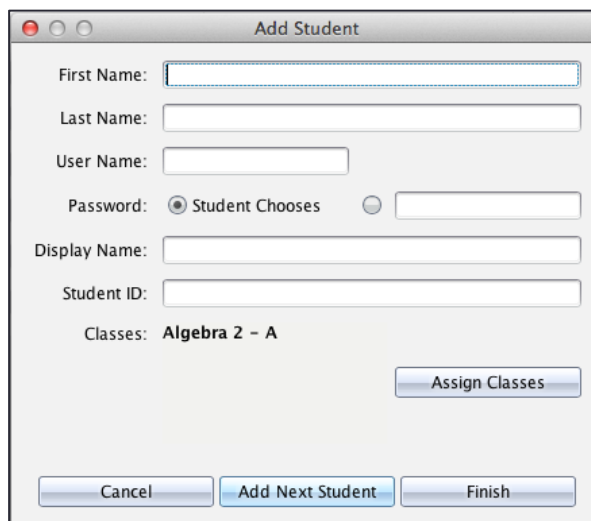
Creating a Class and Adding Students

1. To create a new class, press ![icon]. The Add Classes dialog box appears. Once a class has been created, students can be added at any time. Add students manually (see steps 2-5) or automatically with a CSV document from another software program (see steps 6-11).

2. To create a new class and add the students yourself, select the **Manually** radio button and click Next.

Adding Students Manually

3. In the Class Workspace, click the Add Student icon ![icon] or select **Class > Add Student**.

4. In the "Add Student" dialog box, enter student's First Name, Last Name, and User Name.
   - The User Name must be unique. It cannot be the same as any other student in the current class or any other class on your computer.
   - If the Password field is left blank, the student can enter a personalized password upon logging in for the first time. Otherwise, you can create a password for the student.
   - The Display Name and Student ID fields are optional.
   - To assign the student to other classes, click **Assign Classes**. Select the appropriate classes or deselect the classes to which the given student does not belong.

5. After entering a student's information, select **Add Next Student**. Once the last student is entered, select **Finish**.

Adding Classes by Uploading a CSV File

6. To automatically populate the class with existing student information, you can import students into your class(es) using a .csv file.

- This method of adding classes requires that you download information from your computer information system or grade book software to create a text document or .csv file, which can be opened in a spreadsheet program, such as Excel®.

- The next screen is a sample of the fields that are needed in a document. Some fields are mandatory, such as Class Name, Student First Name, Student Last Name and Student User Name. If the document contains students in several sections of the course that you are teaching, add a column for that purpose.

- Passwords can be set up, but this is an option. If you do not assign a password, then students can select a password the first time that they log in. A field for the Student ID numbers can also be created but is not necessary.

|	Class Name	Section Name	Display Name	Student First Name	Student Last Name	Student User Name	Password	Student ID
1	Class Name	Section Name	Display Name	Student First Name	Student Last Name	Student User Name	Password	Student ID
2	Algebra 2	A	Maria Agnesi	Maria	Agnesi	AgnMar	AAA	17243
3	Algebra 2	B	Archimedes	Archimedes	Syracuse	SyrArc	AAA	18221
4	Algebra 2	A	Charles Babbage	Charles	Babbage	BabCha	AAA	15225
5	Algebra 2	B	Benjamin Banneker	Benjamin	Banneker	BanBen	AAA	17260
6	Algebra 2	A	David Blackwell	David	Blackwell	BlaDav	AAA	11006
7	Algebra 2	B	Georg Cantor	Georg	Cantor	CanGeo	AAA	13811
8	Algebra 2	A	Mary Cartwright	Mary	Cartwright	CarMar	AAA	17382
9	Algebra 2	B	Augustin Cauchy	Augustin	Cauchy	CauAug	AAA	18860
10	Algebra 2	A	Elbert Cox	Elbert	Cox	CoxElb	AAA	18443
11	Algebra 2	B	Rene Descartes	Rene	Descartes	DesRen	AAA	10945
12	Algebra 2	A	Albert Einstein	Albert	Einstein	EinAlb	AAA	16021
13	Algebra 2	B	Euclid	Euclid	Alexandria	AleEuc	AAA	16065

7. In the "Add Classes" dialog box, click on the Next button.
   - The Add Classes by Uploading a CSV File dialog will open.
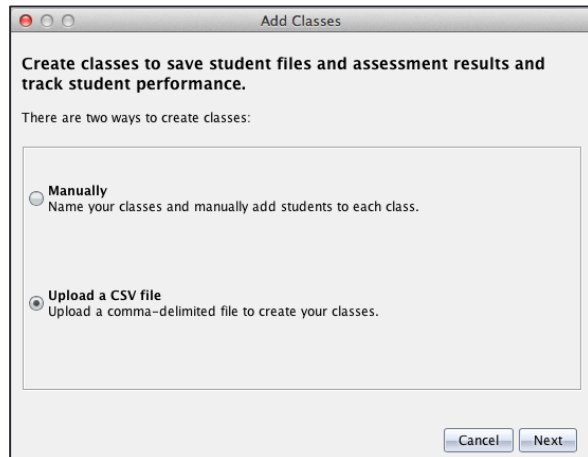
8. Click on the browse button to locate the document for your class(es).
   - Once the document has been located, click on the Next Button.
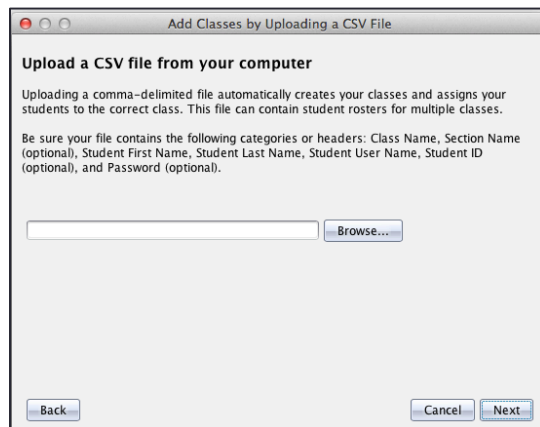
9. If the document matches the needs of the software, a new dialog box will open. The fields in this dialog box allow the teacher to match up fields in the document with fields needed by the Teacher Software.
   - Fields with an asterisk (*) must be mapped using the drop-down fields. The other fields may be left blank if the .csv file does not contain this information.
   - Click on Next when all fields have been mapped.
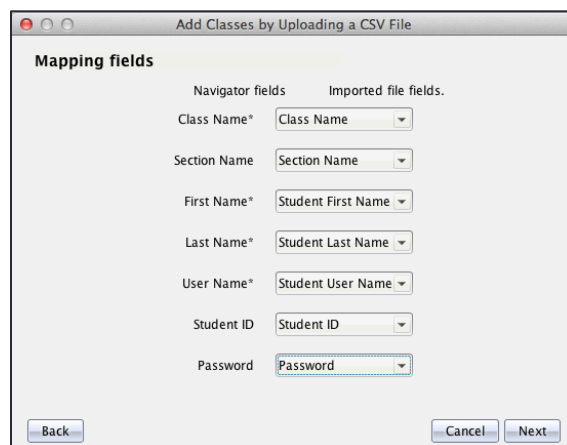
10. A message dialog appears to verify that the classes have been created. Click OK to dismiss it.

11. Click on the Class Drop-down Box to start working with any of your new classes.

Updating Classes Using a New CSV File

1. Create a new .csv file with an updated list of students and resave the .csv file. Select **Class > Update Class Roster**.
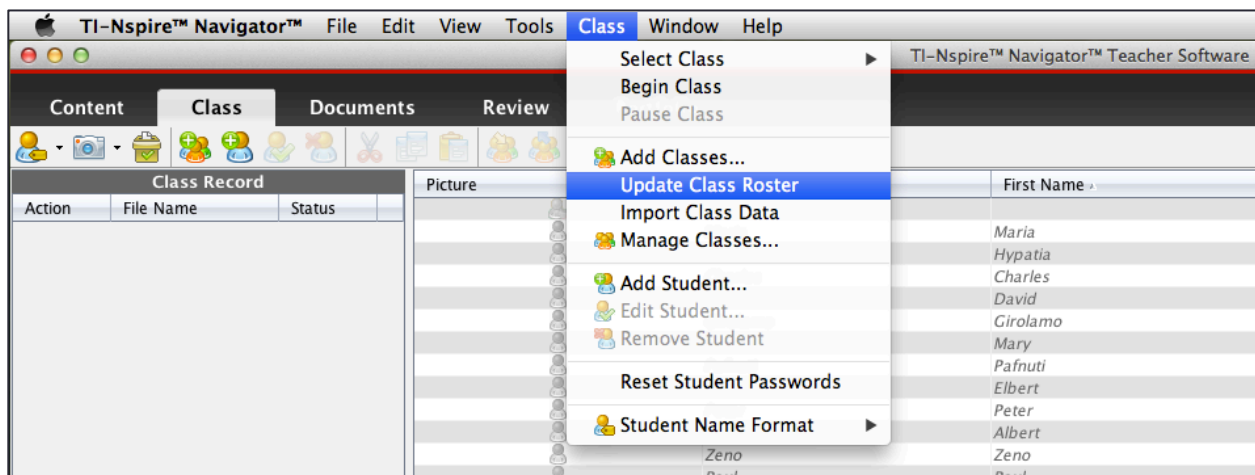
2. A similar set of dialog boxes will present themselves, prompting you to identify the updated document and match fields.

Note: It is possible that errors will happen. The accompanying screen appears when the user name for a new student is a duplicate user name of another student who is already in another class. Click the 'View Details" button to get more information about the error, and then try again.
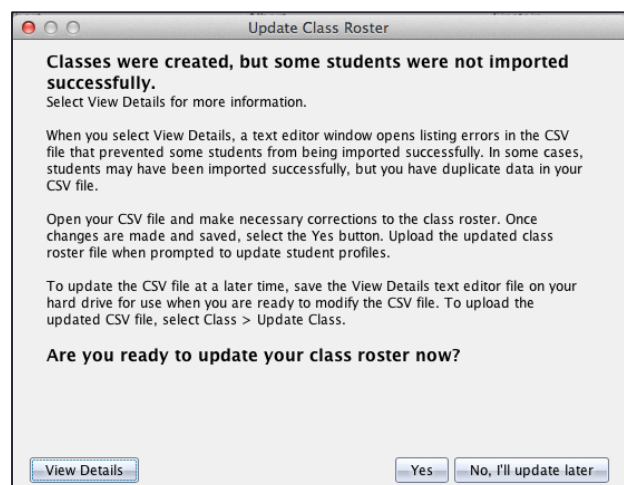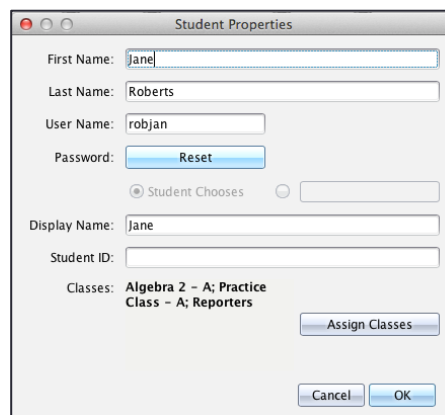
Resetting Passwords

1. If you want to reset the password for **one student**, click once on that student's name in the classroom view, and click on Edit Student 👤. The Student Properties dialog box will open.

2. Click on the Reset button.
   - This will clear the student's password and change the password setting to Student Chooses. The next time that the student logs in, he/she will be able to use create new password.

3. If you want to reset the passwords for **multiple students**, press the CTRL key and hold down your left mouse button to highlight the names of the students.

4. From the menus, click **Class > Reset Student Passwords**.

Note: Some teachers reset all student passwords each time that they open a class. To do this, highlight the names of all students in the class, then use the Reset Student Passwords menu item.
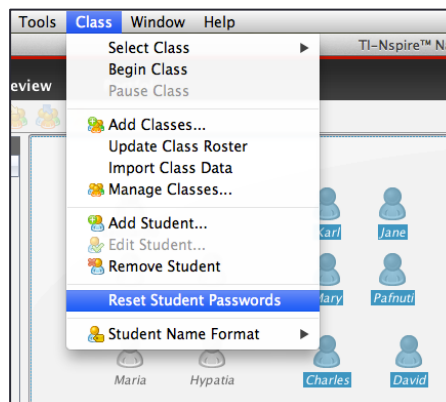
5. You will then be asked whether or not you want to continue. Click on OK.

6. You can reset passwords whether or not a class is in session. The action is particularly useful if you use a generic roster for multiple groups of people.
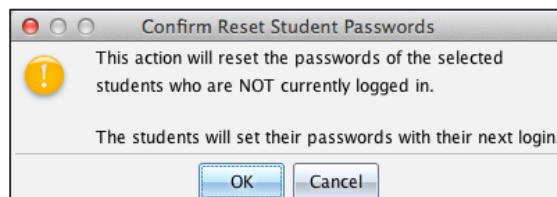
Note: If a student is logged in already, the password will not be reset.

Seating Chart Configurations — Group Management

<u>*SCENARIO 1:*</u>

The full class is arranged visually as they are in the physical classroom.

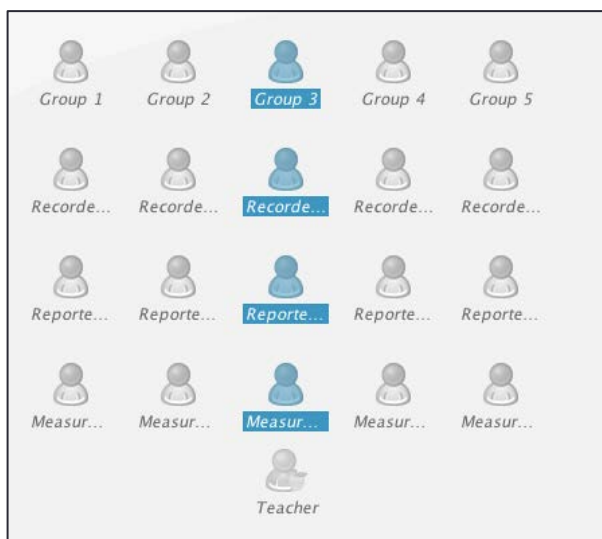| Leonardo | | Karl | | Pierre | | Carl | | Felix | |
| Agnas | Kurt | Mary | Pafnuti | Elbert | Peter | Albert | Zeno | Paul | Leonard |
| Maria | Hypatia | Charles | David | Joseph | Girolamo | Nikoli | Andrei | Blaise | Georg |

Teacher

<u>*SCENARIO 2:*</u>

Conducting a lesson involving groups but only one reporter per group has a handheld? Why not have a class set up for group leaders? Only one person needs to log in per group.

Teacher Group 1 Group 2 Group 3 Group 4 Group 5

<u>*SCENARIO 3:*</u>

Conducting a lesson involving groups where each group member takes a role? In this setup, each of the six groups has a leader, a recorder, a reporter, and a measurer.

The class is set up in a matrix. The teacher can easily communicate by highlighting vertically or horizontally and then performing an action.

Group 1	Group 2	Group 3	Group 4	Group 5
Recorde...	Recorde...	Recorde...	Recorde...	Recorde...
Reporte...	Reporte...	Reporte...	Reporte...	Reporte...
Measur...	Measur...	Measur...	Measur...	Measur...

Teacher

Conducting a lesson involving groups where each group member takes on a role? But what if you wanted the groups to be arranged as they are physically in the room?

The teacher can accommodate this by naming the users so that they can be sorted by function and group in the Student List View.
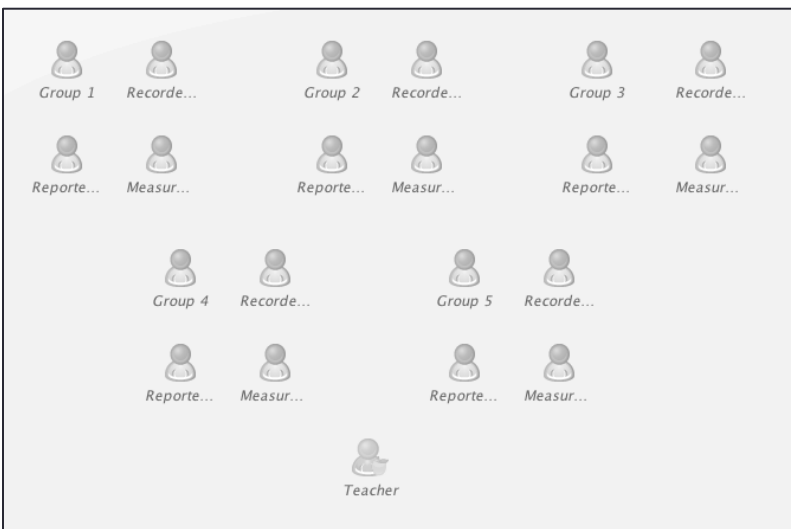
Student List View

In the bottom right corner of the screen are icons that permit the teacher to toggle between Classroom View and the Student List view. In this example, the Student List view has been sorted by Display Name allowing the teacher to easily communicate with all the measurers.

| Picture	Display Name	First Name	Last Name	User Name	Student ID
	Teacher				
	Group 1	Group 1	Group 1	Group 1	
	Group 2	Group 2	Group 2	Group 2	
	Group 3	Group 3	Group 3	Group 3	
	Group 4	Group 4	Group 4	Group 4	
	Group 5	Group 5	Group 5	Group 5	
	Measurer 1	Measurer 1	Measurer 1	Measurer 1	
	Measurer 2	Measurer 2	Measurer 2	Measurer 2	
	Measurer 3	Measurer 3	Measurer 3	Measurer 3	
	Measurer 4	Measurer 4	Measurer 4	Measurer 4	
	Measurer 5	Measurer 5	Measurer 5	Measurer 5	
	Recorder 1	Recorder 1	Recorder 1	Recorder	
	Recorder 2	Recorder 2	Recorder 2	Recorder 2	
	Recorder 3	Recorder 3	Recorder 3	Recorder 3	
	Recorder 4	Recorder 4	Recorder 4	Recorder 4	
	Recorder 5	Recorder 5	Recorder 5	Recorder 5	
	Reporter 1	Reporter 1	Reporter 1	Reporter 1	
	Reporter 2	Reporter 2	Reporter 2	Reporter 2	
	Reporter 3	Reporter 3	Reporter 3	Reporter 3	
	Reporter 4	Reporter 4	Reporter 4	Reporter 4	
	Reporter 5	Reporter 5	Reporter 5	Reporter 5	

Starting a Class Session

1. Launch the TI-Nspire™ Navigator™ Teacher Software.
   - On a PC, click **Start > Programs > TI Tools > TI-Nspire Navigator > TI-Nspire Navigator**.
   - On a Mac®, click **Finder > Applications > TI-Nspire Navigator**.
   - On either platform, an icon can be placed on the desktop and double-clicked to open the software. On a PC, the icon can also be placed on the task bar at the bottom of the screen. Similarly, on a Mac™, the icon can be added to the dock.
   - The TI-Nspire Navigator Teacher Software will open. The tab that is active will be the same tab that was open when the software was last shut down.

2. Ensure that the TI-Nspire Navigator network hardware is connected and powered and the wireless network adaptors are firmly inserted into the TI-Nspire™ handhelds. Look in the bottom left corner of the screen to determine if there are any clients (handhelds) connected to the network.

3. In the upper-right corner of the screen, choose a class in the **Current Class** selector and click **Begin Class**.
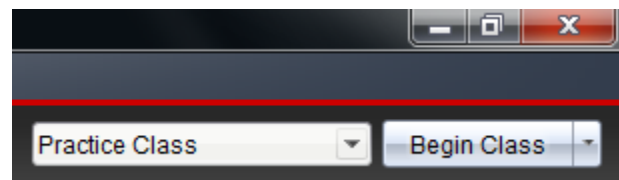
4. If it is not already selected, click the Class tab. Choose Seating Chart in the Student View selector located in the bottom-right corner of the screen.
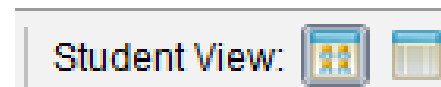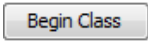
5. As students complete the log in process, their corresponding icons in the Seating Chart will become active.

Student Login

To get students logged in to the TI-Nspire™ Navigator™ network:

1. On the teacher computer, within the TI-Nspire™ Navigator™ Teacher Software, click [Begin Class].

2. Turn on the handheld that is connected to the wireless network adaptor. The following icons will appear in the handheld in the upper-right corner of the handheld.

Icon	Status	Meaning	Icon	Status	Meaning
📶	Blinking	The handheld is searching for an access point.	↻	Blinking	The handheld is connected to the network and is ready to login.
📶	Solid	The handheld has found an access point.	↻	Solid	The handheld is logged in to the network and is fully charged.
☎	Solid	The handheld is not communicating with the wireless module. Detach the wireless module, wait for the icon to disappear, and then reattach the wireless module.			

3. Press [⌂ on] to go back to the Home screen. Press [5] for Settings, and press [5] a second time for Login.

4. The first time that the handheld is used, the student will identify the network.

    *   Once the network is detected, the student will enter his/her user name, and press [tab] to move to the password field.

    *   Enter the password, press [tab] to move to the "Login" button, and press [enter].

    *   The message shown to the right will appear on the handheld, indicating that the student has successfully logged into the TI-Nspire Navigator class.

# Using the Class Capture and Live Presenter Tools

The Class Capture tool in the TI-Nspire™ Navigator™ System enables you to do the following:

- Monitor and view your students' handheld screens. This enables you to ensure all students are on track with an assignment.
- Capture one or several students' screens for discussion in the classroom. You can hide student names to focus the discussion on teaching aims and not on individuals.
- Select and display an individual student's screen and view work as a Live Presentation.

This section contains the information you need to know to use the Class Capture tool in your classroom.

The Class Capture Tool

You can view captured screens in the Class Capture tool as thumbnails on the computer display. This is the traditional view for Class Captures within TI-Nspire™ Navigator™ Teacher Software. In the image below, the students' screens have been captured during an exploration of linear functions.
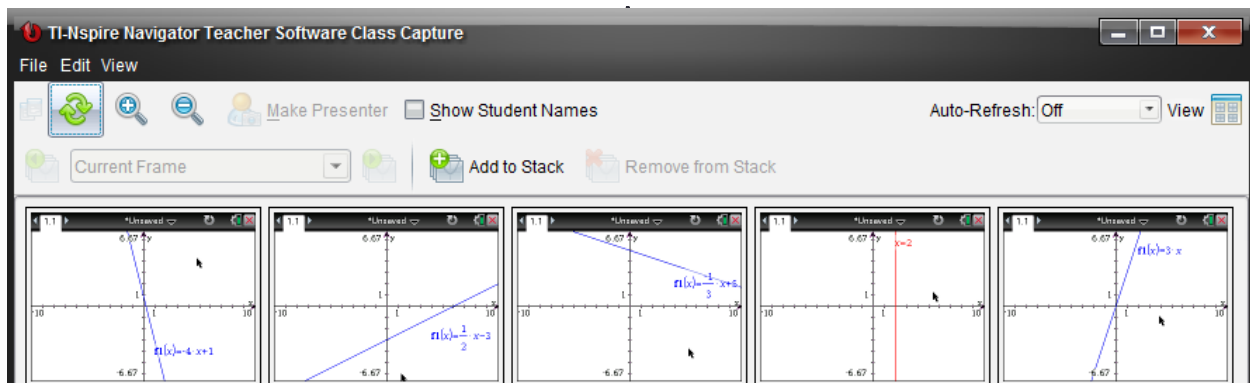
- To capture handheld screens, select the Class Capture icon from the tool bar or from the Tools tab.
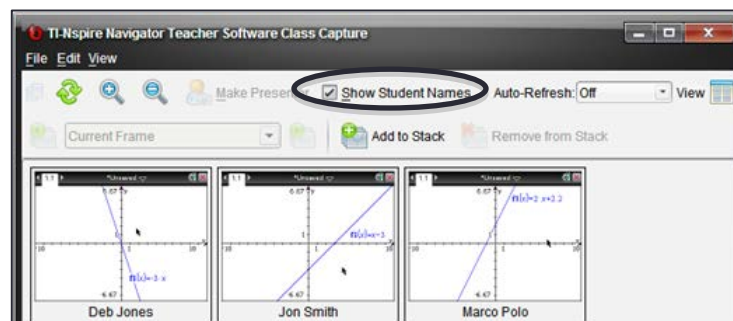

Screen Capture…

- In the dialog box that pops up, click the Class icon to take Class Captures of the entire class, or click the Individuals icon to take Class Captures of select individual students.

    - The graphic to the right shows that the teacher is capturing his/her own screen. Teachers sometimes use their own handhelds in order to demonstrate something to the class.

    - When using the Individuals option, hold down the "Ctrl" key to select any number of nonconsecutive students, or hold down the "Shift" key to select any number of consecutive students.

    - When "logged in only" is selected, only students who are currently logged in will be displayed.

- Click OK. The first time Class Capture is used, the handheld screens will be tiled on the screen.
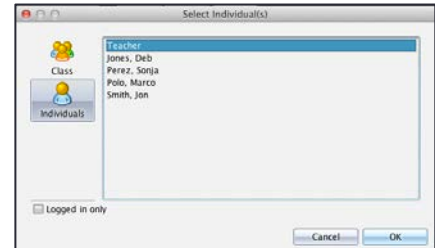
Note: If you want to hide the Teacher handheld in Class Capture, you can select "Randomize Order in Class Capture" and "Individualize Teacher Device in Class Capture" under Teacher Preferences.
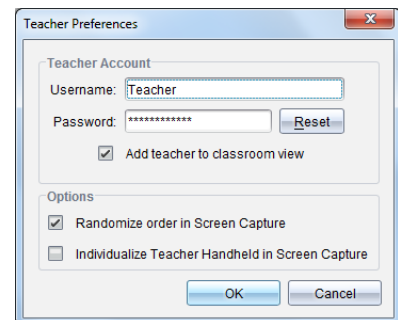
- You have the option of choosing whether the students' names are displayed with the Class Captures.

    - If a Class Capture is performed when the student handhelds are not on the Home Screen, the student names will not display on the computer unless 'Show Student Names' is selected.

    - Use caution when showing student names in front of the class. The anonymity of the screen shots is very important to avoid potential student embarrassment.

▪ By default, the Class Capture is static. However, an Auto-Refresh feature is also available. In the screen below, the teacher has elected to refresh the screens every 30 seconds.
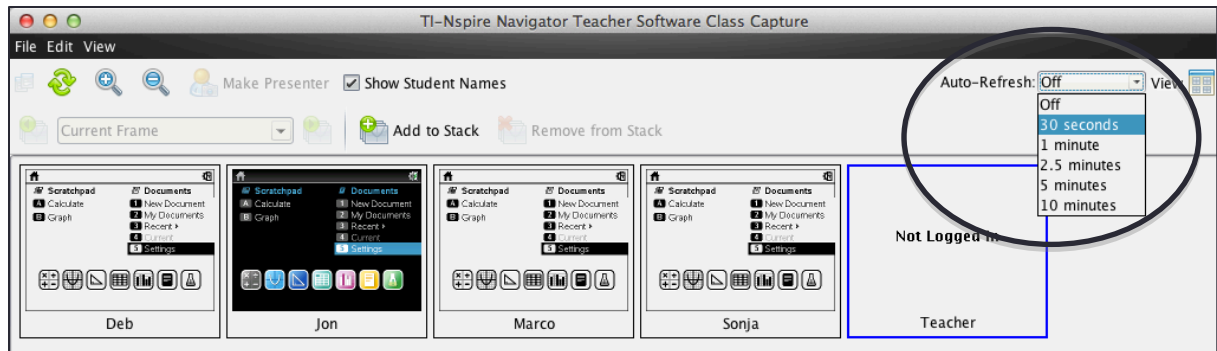

▪ There is a View option in the upper right corner of the Class Capture window. Clicking on this button gives teachers the option of displaying screens as tiles across the window or in Gallery view.
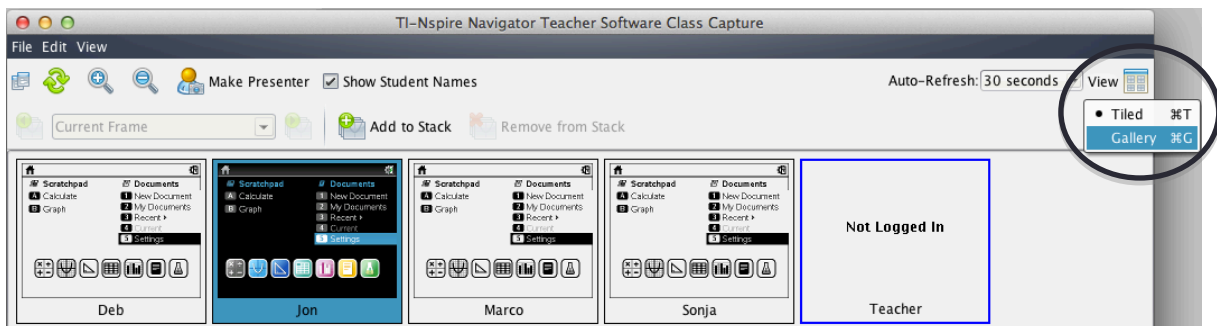
▪ Select Gallery view. The screens are displayed as thumbnails down the left pane. Initially, the large area to the right of the thumbnails is blank.

- Click on the screen of a student to place a large image of that student's screen in this field.

  - In the accompanying screen, Jon's handheld is highlighted, showing his Home screen.
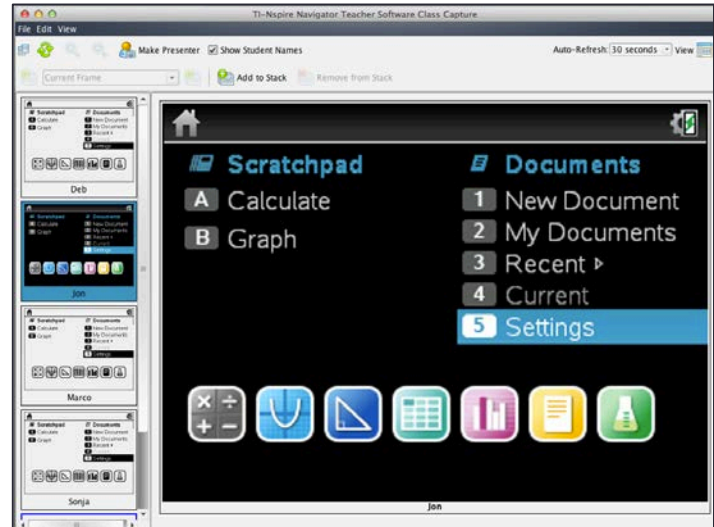
Frames and Stacks

Class Captures are saved as groups called frames, and frames are stored in stacks. To return to an earlier view of screen captures, you simply select a numbered frame from the stack.

1. Click Add to Stack to add a frame of Class Captures to the memory.
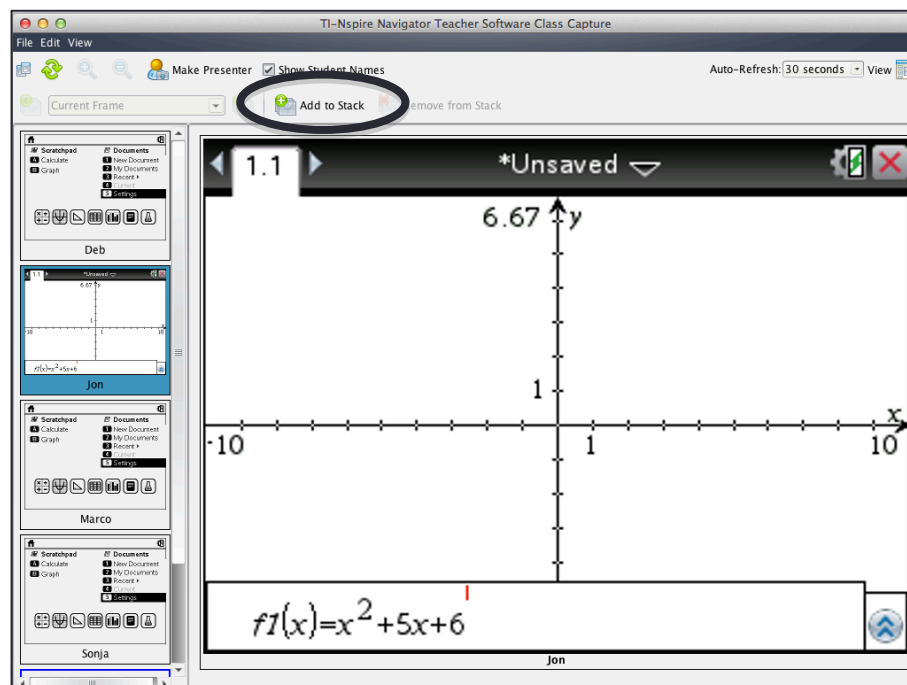
- The screen below shows that four frames have been created.
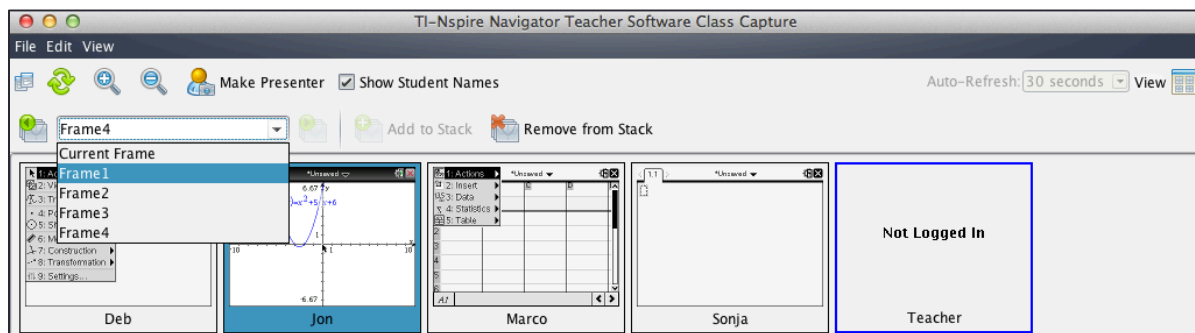
2. To delete any frame from the stack, select the frame from the drop-down list, and click the **Remove from Stack** button.

3. When you exit from Class Capture, you will be prompted to save your stacks of frames.

- If you choose to save, you can select a location for saving the frames.

- Each frame holds one screen for each student.
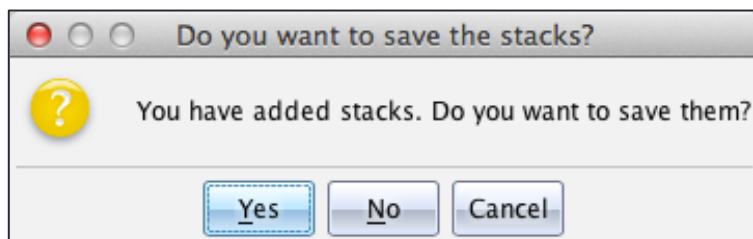
The Live Presenter Tool

Display work as it is being performed on the handheld and discuss the step-by-step progress with the class by displaying your own handheld screen or selecting any student's handheld screen.

While the live presentation is displayed, you can record keystrokes, show the handheld being displayed, and show a key press history.

1. While in the Class Capture window, select a screen to become the Live Presenter. The screen will have a blue border around it showing you that it has been selected.

2. Click **Make Presenter**.
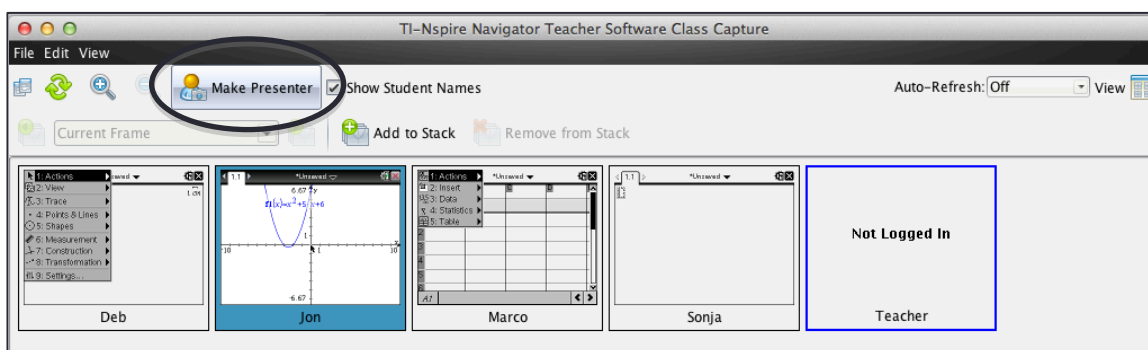
- The selected handheld screen will now be projected to the class as the Live Presenter.

- The default display for Live Presenter shows **only** the selected screen.

- If student names are displayed, the name is shown under the screen.

3. If you want an image of the handheld to also project for identifying keystrokes, check the Show Handheld checkbox at the bottom of the window.

- The type of handheld displayed will be automatically identified by the software and will match the type of handheld the student is using. For example, if the student is using TI-Nspire™ with Clickpad or TI-Nspire™ with Touchpad, that is what will show.

                                          TI MathForward™ Program
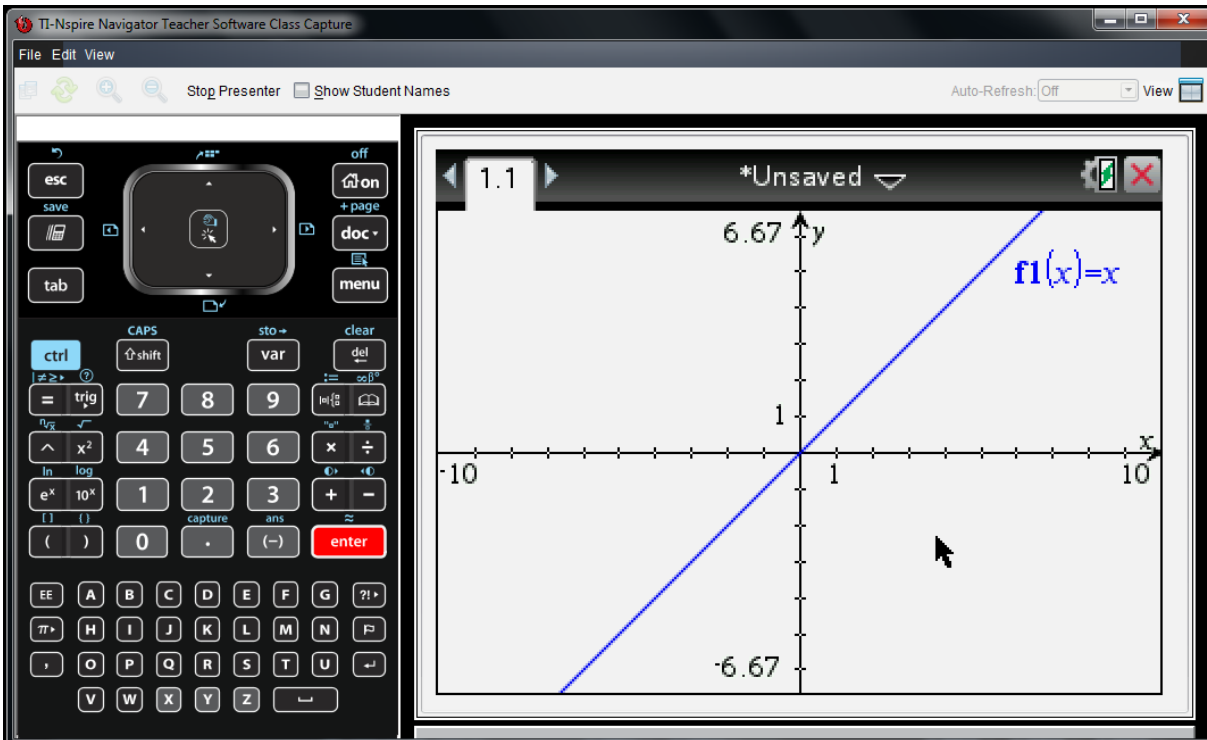
Note: While Live Presenter is active, all other students' handhelds are unaffected by the presentation and can be used.

Everything the student does on the handheld will be displayed to the class. Although only one student can present at a time, you can select any student to present as long as the student is logged in and the session is active.

4. To see a text record of the keys pressed on the Live Presenter's handheld, check the Show Keypress History checkbox.

5. To end Live Presenter, click Stop Presenter. You will be taken back to the Class Capture Window.

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     TI MathForward™ Program
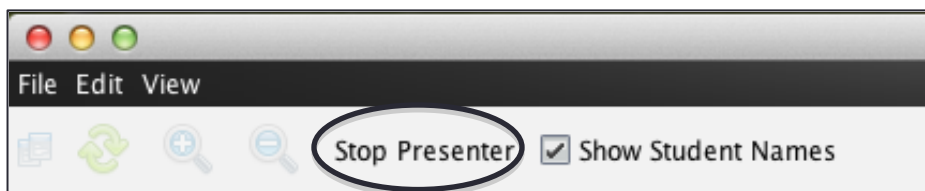
Creating a Question Document

Overview of Question Types

1. In the TI-Nspire™ Navigator™ Teacher Software, go to the Documents Workspace. Create a new document by clicking the New Document icon 🗔 and selecting **New TI-Nspire™ Document**.

2. Insert a Question application by selecting 🗔 **Insert >** 💡 **Question**.
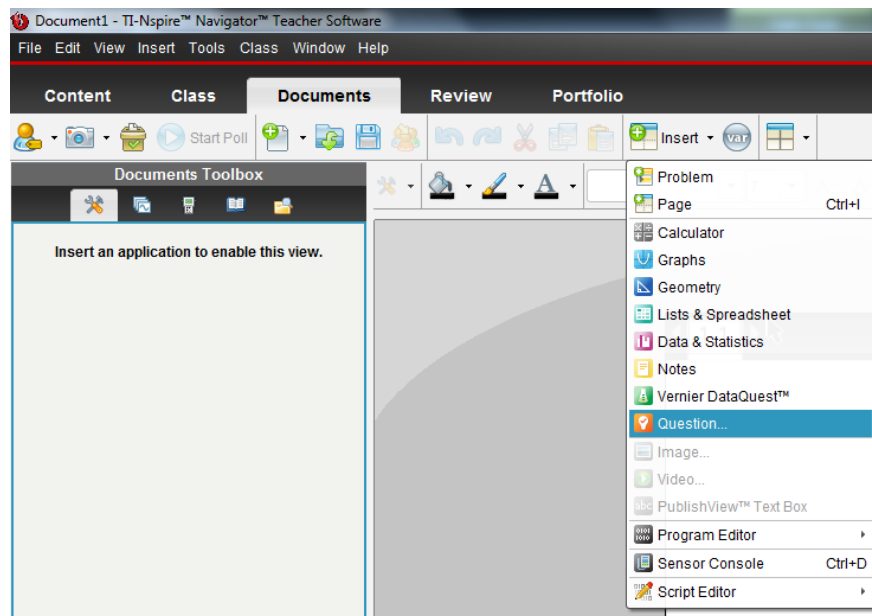
Note: TI-Nspire™ document pages with the Question application can only be created with Teacher Software. The Question application is not available in the TI-Nspire™ Student Software.

3. The Choose Question Type dialog box appears. Select **Custom Choice**, and click **Insert**.

Note: A brief description of the highlighted Question Type appears at the bottom of the window. Explore the other question types by highlighting a question type and reading its description.
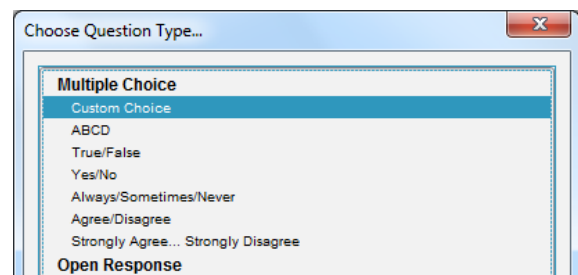
4. Enter the following problem: Solve for x: $\frac{5}{9}(x-32)=100$.

- Type the equation into an Expression Box by going to the 🛠 **Document Tools** pane in the Documents and selecting 📐 **Insert > Expression Box**.

- Enter the equation and then press Enter.

Note: An Expression Box can also be inserted by pressing **Ctrl+M**. Math templates are available in the 📖 Utilities pane in the Documents Toolbox.
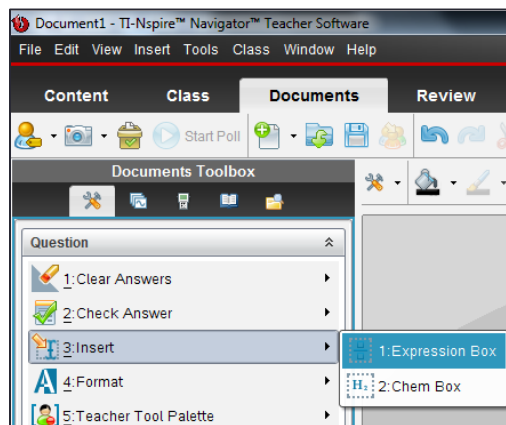
5. Click in the first answer field. Insert an Expression Box. Type the first answer choice and then press Enter.

- To move to the next answer field, click in the next field, or press Enter. Continue to type the remainder of the answer choices.

Note: To remove an empty answer field, click in that field, and press the Backspace key.
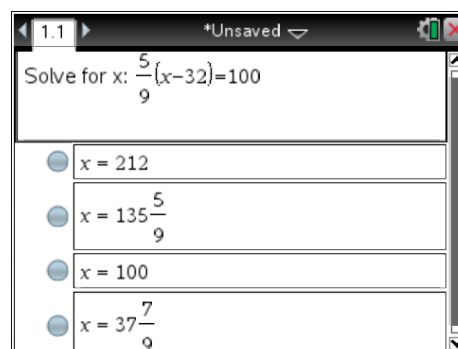
6. As you type answer choices, they automatically appear in the Correct Answer fields in the Configuration panel of the Document Toolbox. Select the correct answer by clicking on the check mark in front of the answer choice.
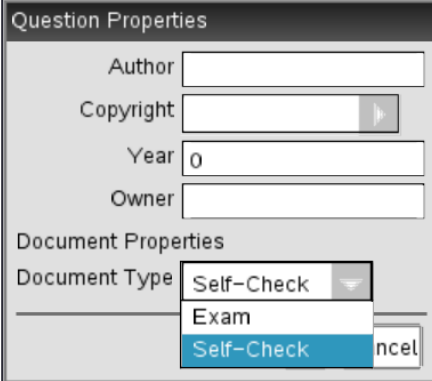
Note: In the Configuration panel, the Multiple Choice Properties can be changed to allow a different Response Type. Single Response allows one correct answer, while Multiple Response allows multiple correct answers. The fields can be expanded or collapsed by clicking ▼ or ▶.
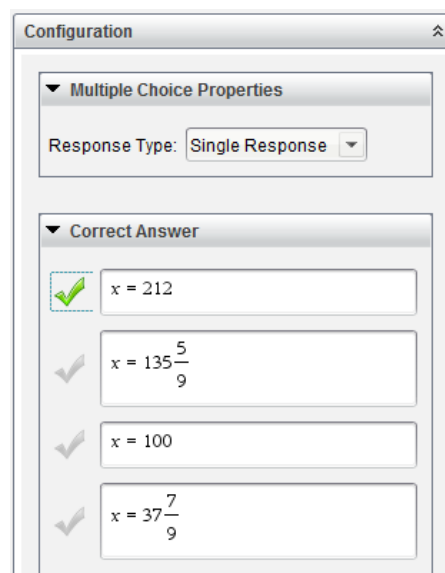
7. There are two types of question documents: **Exam** and **Self-Check**.

   - Exam documents can be scored using the TI-Nspire™ Navigator™ System. The default setting for the Document Type is Exam.

   - A Self-Check document allows students to check their answers after they select or enter a response.

8. To create a Self-Check document, select [👤]**Teacher Tool Palette > Question Properties**.
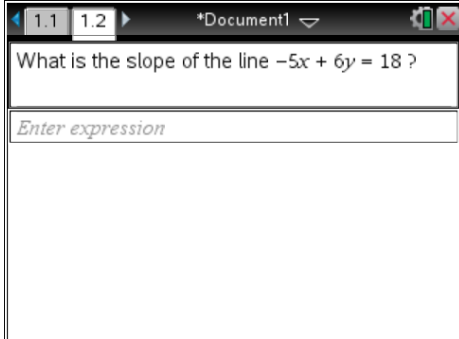
   - Change the Document Type to **Self-Check.** Click OK.

Note: The Document Type applies to all questions in the current document, not just the current question.

Note: After students answer a question in a Self-Check document, they can check their answers by selecting **Menu > Check Answer**. A message is displayed ("Your current answer is correct." or "Your current answer is incorrect."). If the answer is incorrect, two options appear: **Show Correct Answer** and **Try Again**.

   - In Self-Check documents, an *Explanation* question type (unscored) does not display the correct or incorrect answer message when students select **Check Answer**. However, any suggested response entered by the teacher will be displayed.

   - The Text Match question type (scored) requires students to exactly match the correct answer, including templates, if applicable. When students select **Check Answer**, the correct or incorrect answer message will be displayed.

9. Insert an Expression question by selecting [🗋] **Insert** > [🔘] **Question > Equations and Expressions > Expression**.

   - Type the following problem into the question field, inserting an Expression Box for the equation:

     What is the slope of the line $-5x + 6y = 18$?

10. In the Configuration panel, under Expression Properties, change the Response Type to **Number**.
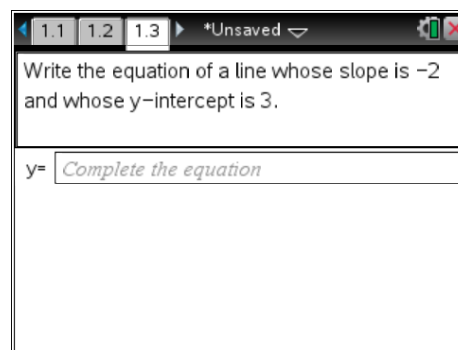
- Type $\frac{5}{6}$ into the Correct Answer field.

- If desired, change the Tolerance from ±0 to ±0.001. This will help students who answer in decimal form.

Note: Templates and symbols can be accessed by clicking the 📖 Utilities icon in the Correct Answer field.
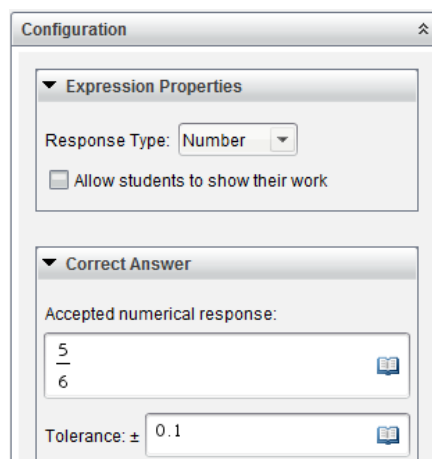
11. Insert a "y =" question by selecting ⊞ **Insert > 💡 Question > Equations and Expressions > y =**.

- Type the following problem into the question field:

  Write the equation of a line whose slope is –2 and whose *y*-intercept is 3.

12. In the Configuration panel, under Equation Properties, check the box for **Include a Graph Preview**.

- In the Correct Answer field, type –2*x* + 3 as an accepted response. Check the box for **Accept equivalent responses as correct**.

Note: The Response Type options include *y* = and *f*(*x*) = notation. The number of responses and prompt location can be changed. Students can be allowed to show their work in a series of blank fields.

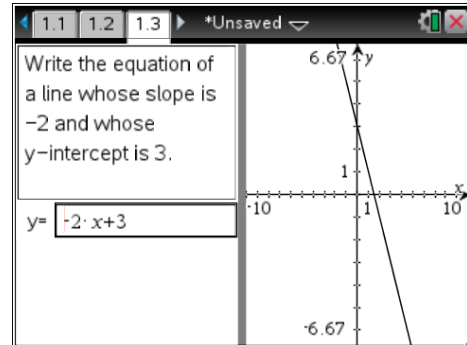*Note*: When might you choose not to check the box for **Accept equivalent responses as correct**?
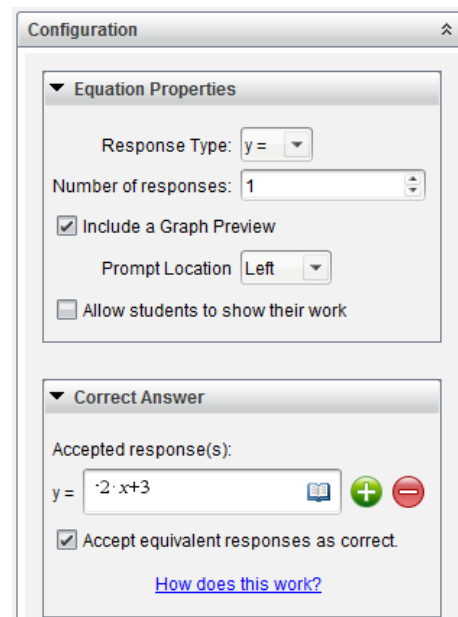
Note: By changing the properties to **Include a Graph Preview**, a Graphs application is automatically inserted on the right side of the screen.

When an expression is typed into the *y* = field, the function is automatically graphed. If Enter is pressed, another *y* = field appears.

13. Insert a Drop Points question by selecting ⬚ **Insert** > 💡 **Question > Coordinate Points & Lists > Drop Points**.

- Type the following problem into the question field:

  Plot a point whose *y*-coordinate is twice its *x*-coordinate.
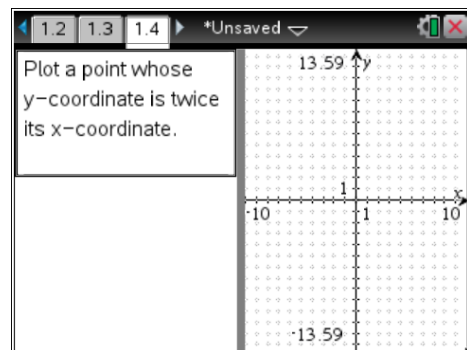
Note: The **Drop Points** question type automatically includes a Graphs application with a grid.

14. In the Correct Answer field, enter (1, 2) as an acceptable answer.

- Add an additional acceptable answer field by clicking the green addition ➕ icon. Enter (2, 4) as an acceptable answer.

- Check the box for **Accept equivalent responses as correct**.

15. To create an Image question, an image can be created in the Graphs application, copied onto the clipboard, and pasted into the Question application. Insert a Graphs page by selecting [icon] **Insert** > [icon] **Graphs**.

- Graph the function $f1(x) = x^2 + 2x - 3$. Capture an image of the screen by clicking the Class Capture icon [icon] and selecting **Capture Page**.
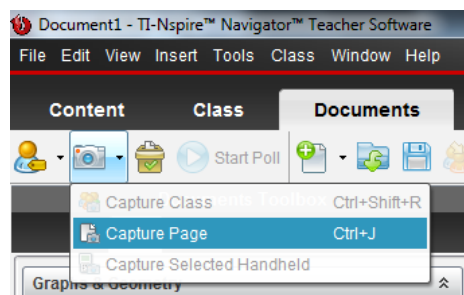
*Note:* The image is automatically copied to the clipboard. **CTRL+J** can also be used to capture the page.

16. Insert a new question by selecting [icon] **Insert** > [icon] **Question > Image > Point on**.

- Type the following problem into the question field:

  Identify the zeros of the quadratic graphed below.

- Click the bottom half of the screen, and select **Edit > Paste** from the menu at the top of the software.
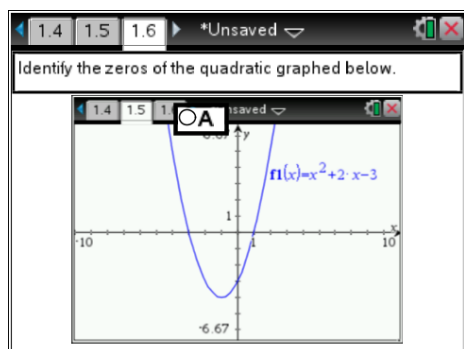
17. In the Configuration panel, change the number of responses to four.

- Four points will appear on the image. Move the points so that two are on the two *x*-intercepts, one is on the *y*-intercept, and the final point is on the vertex.

- In the **Answers** panel, click the check boxes to identify the correct answer(s).
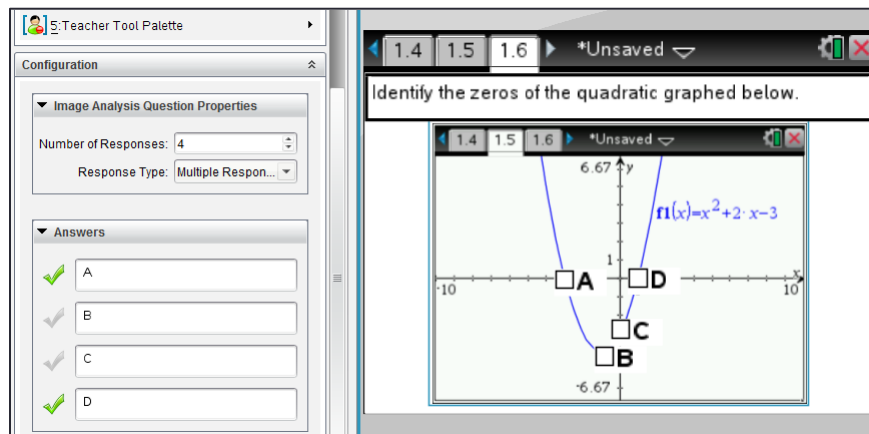
*Note*: Delete the extra Graphs page by changing to the Page Sorter View in the Documents Toolbox, right clicking on the extra page, and selecting **Delete**.

18. Insert another "y =" question by selecting ▦ **Insert >** 💡 **Question > Equations and Expressions > y =**.

   • In the Configuration panel, change the Equation Properties to **Include a Graph Preview** and the **Prompt Location** to **Top**.

Note: To maximize the area of the Graph Preview, grab and move the gray bar separating the question and answer fields from the Graph Preview.
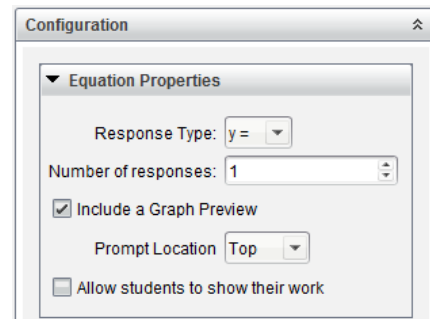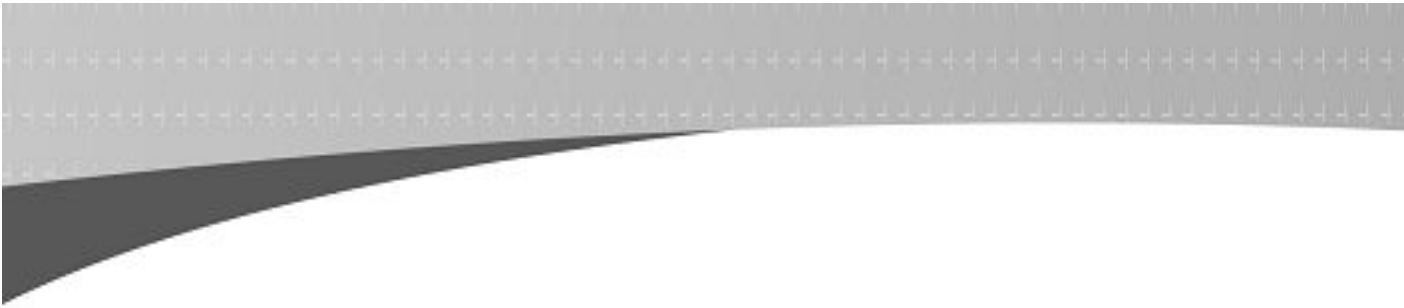
19. Insert an image into the Graph Preview by clicking the graph, and then selecting ▦ **Insert >** 🖼 **Image**.

   • Choose **Bridge1.jpg** and click **Open**.

   • Type the following problem into the question field: Write an equation to model the suspension cables.

20. Save the document.

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   TI MathForward™ Program
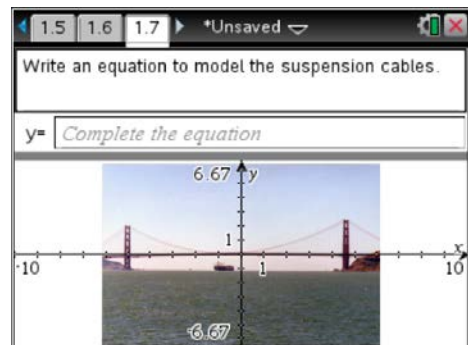
Using the Quick Poll Tool

An important teaching technique is *questioning students* during class to gauge their understanding of the topics and to ensure that the class discussion is on pace with the students understanding.

The Quick Poll feature of the TI-Nspire Navigator System enhances the questioning technique by allowing ALL students to answer the posed questions and allowing the teacher to see all student responses. Then the teacher can make the appropriate reactions/adjustments to the class based on this measurement of student understanding.

The Quick Poll tool window contains several sets of controls and three tabs that you can use to run and view polls in the TI-Nspire Navigator System.

Sending a Quick Poll

1. After the TI-Nspire Navigator class has been started and students have logged in to the class, click the Quick Poll icon 📦. The Quick Poll tool window opens.

2. In the Poll Setup Tab, select a question type from the drop-down list. In the screen to the right, the teacher has selected a Multiple Choice ABCD question.
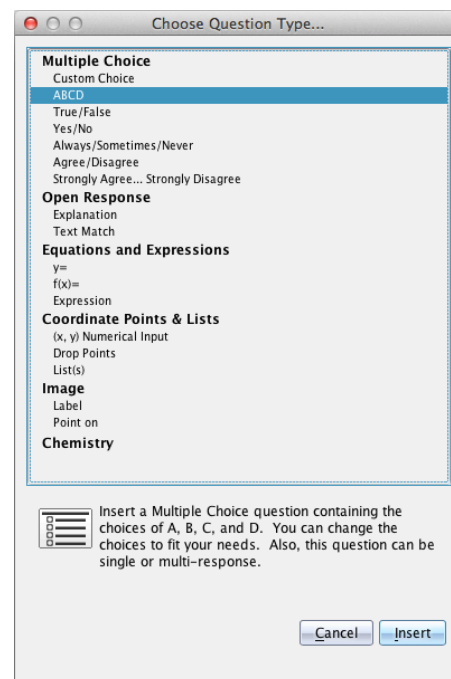
3. The question type selected will now open in the Documents Workspace. The steps in setting up a question for a Quick Poll are identical to the steps for creating a Question page.

- In the Documents Toolbox, check the correct answer in the configuration field.
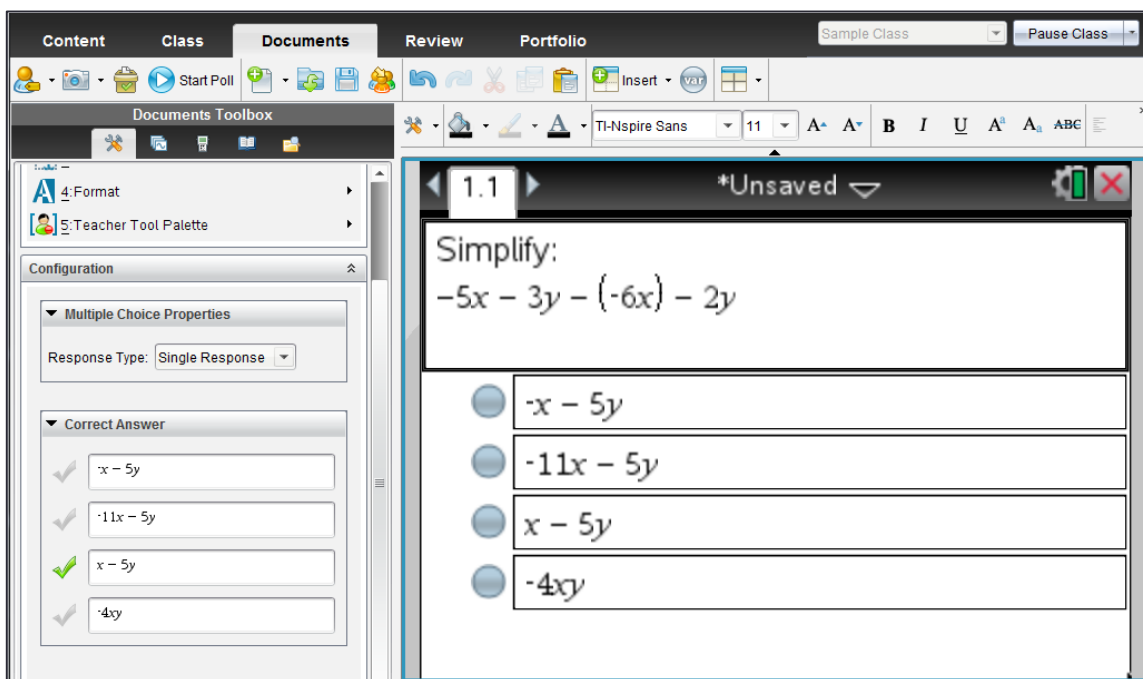
4. Click the Start Poll icon to send the question to the class. The software will open in the Review Workspace.

- The Review Toolbox shows the number of students who are working on the question and the number who have already submitted their choice.
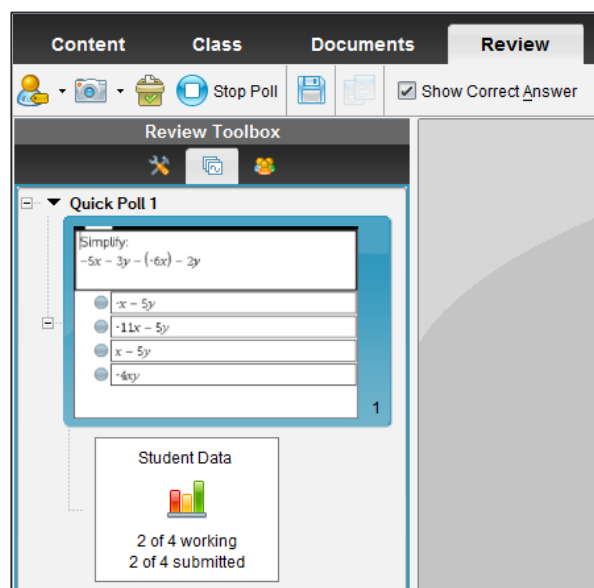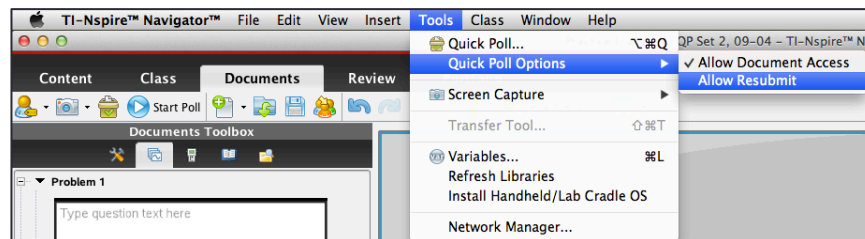
5. Select **Tools > Quick Poll Options**.

    - In this case, the teacher has given students permission to access other documents on their handheld and is about to give students the ability to re-submit answers.

6. If you want to pause the Quick Poll while the students are working, click on Pause Class to pause the Quick Poll.

    - This will give you an opportunity to discuss any issues with the question on the Quick Poll or any issues that arise from the class.

    - When this button is used, the display changes to Resume Class. On the students' handhelds, the a rectangle will pop up displaying the message "The teacher has paused the class."

7. Clicking the button again on the software will allow students to continue.
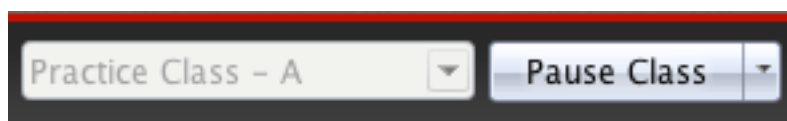
8. To end the poll, click the Stop Poll icon .

9. Click on the Student Data entry in the Review Workspace to view the results of the poll.

    - In the example, the answer check box has been activated to show the correct answer.

    - Some teachers prefer to leave this box unchecked while discussing the question.
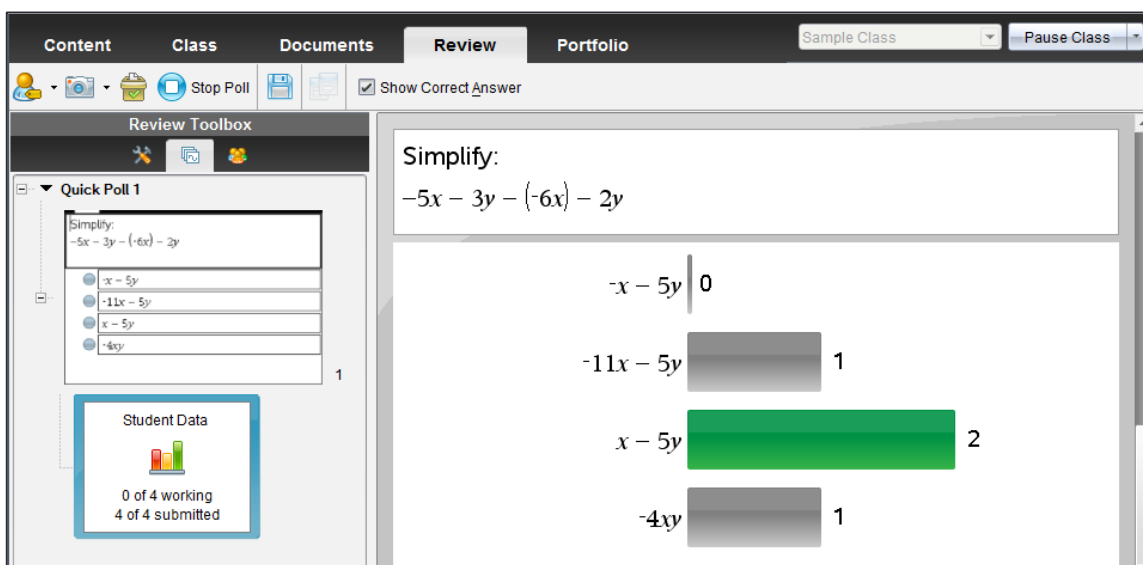

10. To save the results of a Quick Poll, click . A prompt will appear on the screen giving you the option to name the poll question in the Portfolio.

11. Since the Quick Poll questions are compiled in the Documents Workspace, Quick Poll questions can be saved as a document for future use. Select **File > Set Quick Poll Set as Document**. Notice that another option is to **Send to Missing**, which sends out poll(s) to any students that did not receive the original poll..

   TI MathForward™ Program
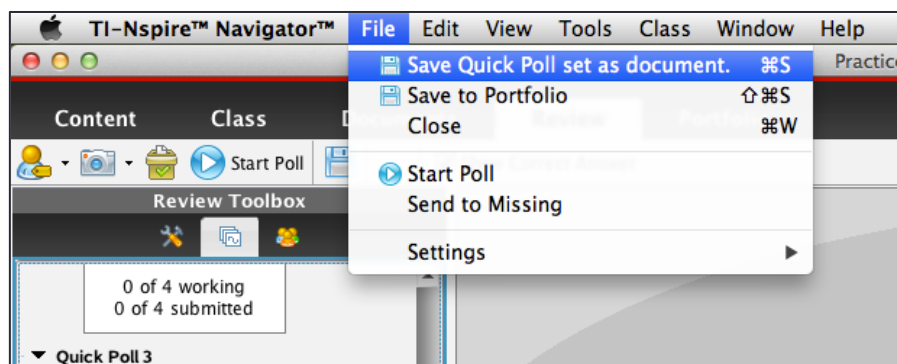
## Responding to a Quick Poll (Student Instructions)

1. After the teacher has started the Quick Poll question, all students who are logged in to the class will automatically receive the question on their calculator as a pop-up window.
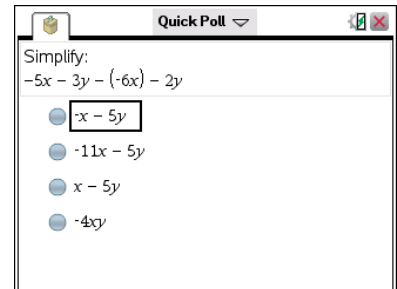
2. By pressing [tab] (or ▼), students can move into the answer area to choose their answer for a Multiple Choice question, or they can type the answer using the calculator keypad.
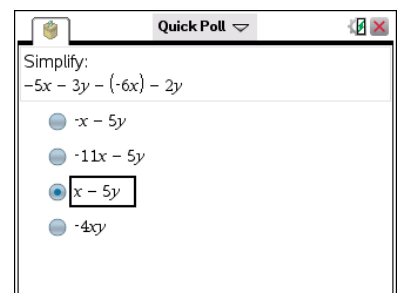
3. By pressing [doc▾], students will get a drop-down menu at the top of the screen. They should choose Submit.

   - If the teacher has set the option to allow students to Resubmit their responses, this drop-down will show the first option as Resubmit.
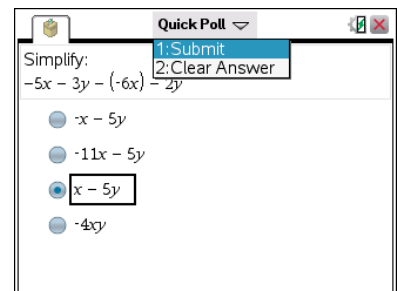
4. Students can also use the touchpad to move to the Quick Poll tab at the top of the screen, and press to invoke the Quick Poll drop-down.

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     TI MathForward™ Program

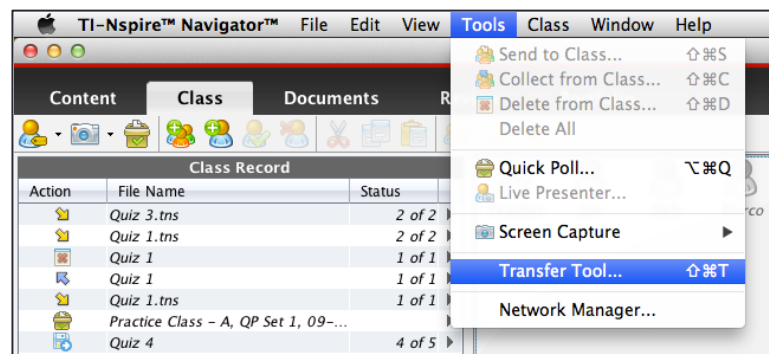# Exchanging Documents with Students

The Transfer Tool
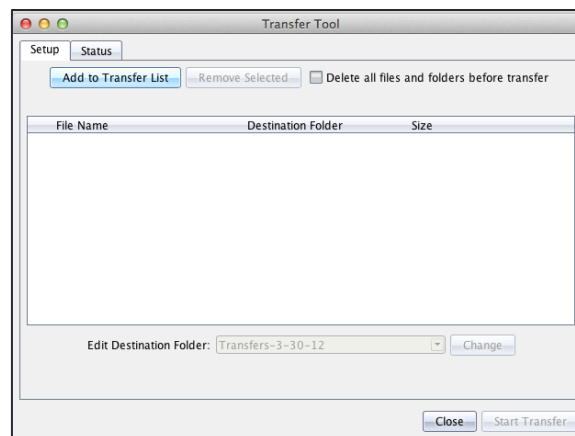
Sending Documents Using the Transfer Tool

1. If necessary, launch the TI-Nspire™ Navigator™ Teacher Software.

Note: There must be no class in session for the Transfer Tool to work. If the class is in session, end it.

2. From the menu, select **Tools > Transfer Tool**.

3. Click Add to Transfer List, and browse for the document(s) on your computer to be transferred.

The default destination folder on the handhelds will be in the form "Transfers-today's date". Click on the document name. If there is more than one document, use the CTRL key on a PC or the command key on a Mac® to highlight the names of all of the documents. Near the bottom of the dialog box, highlight the default name.
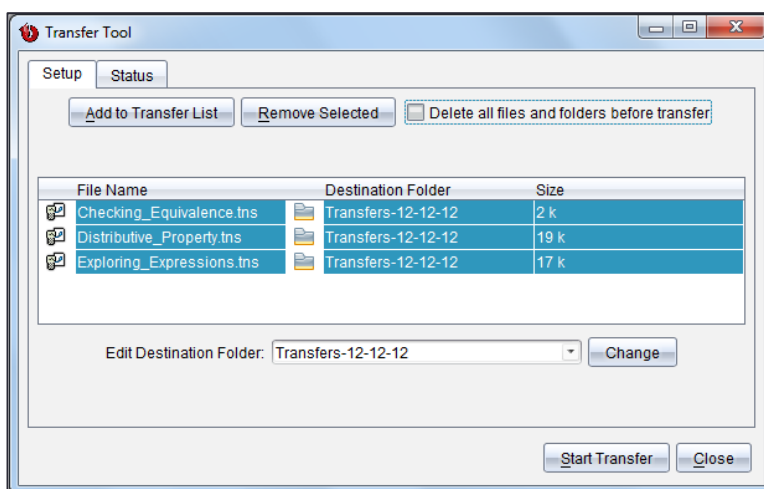
4. Type in the name of the folder where you would like the documents to be stored on the handhelds.
5. Click the "Change" button.
   - The display will change to show the new destination folder beside each of the document names.
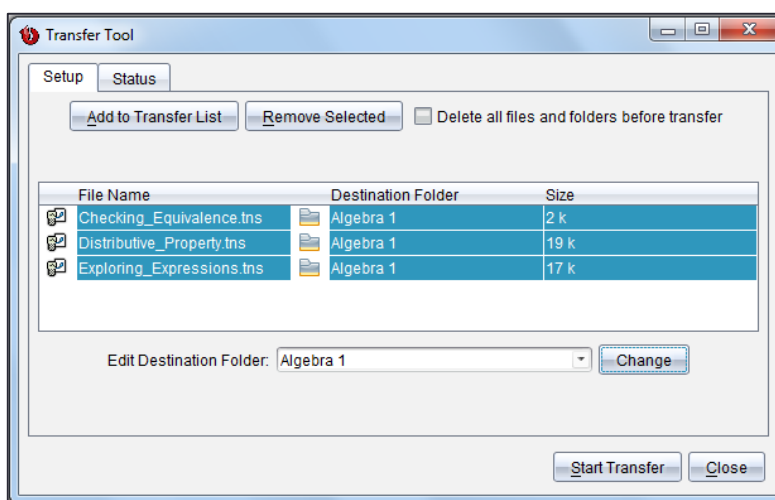
6. Click on the Start Transfer button, and the documents will be delivered to all handhelds attached to the network.
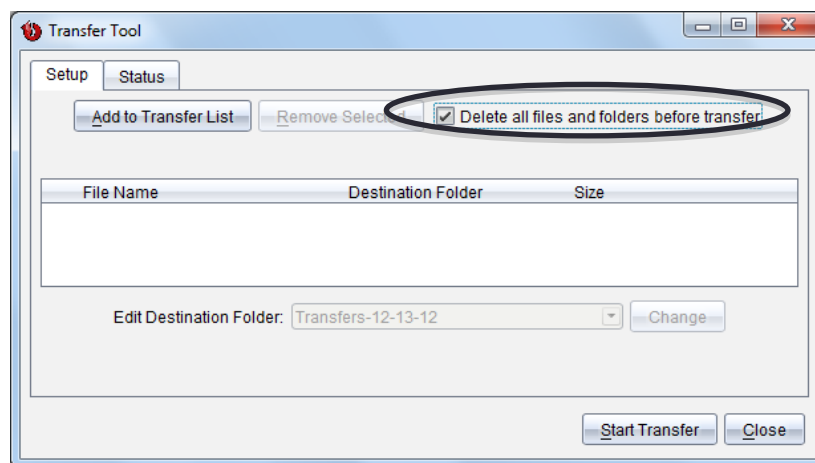
                                                    TI MathForward™ Program

Delete All Folders on Handheld

1. In the TI-Nspire™ Navigator™ Teacher Software, go to **Tools > Transfer Tool**.

Note: A class must not be in session for the Transfer Tool to work.

2. Click on the Tools tab.
3. Click on the Transfer Tool icon.
4. Click to select **Delete all device folders and documents before transfer**.

-   You can add documents to the handheld using the steps from the section Sending Documents to Handheld. Those documents will be put on the handheld after all the documents and folders have been deleted on the handhelds.

5. Click Start Transfer.

    -   A confirmation message will appear. Press OK to continue with the deletion of items.

    -   You will see the transfer window with the status of the transfer.

    -   The status tab will indicate the document(s) being transferred to individual handhelds and their specific status.

6. When all handhelds are done, click Stop Transfer, and then click Close.
    -   The documents will be deleted from the students' handhelds, and they will see a message on their screen indicating that all documents have been transferred.

Sending Documents

1. In the TI-Nspire™ Navigator™ Teacher Software, begin a class and have the students log in.

2. Click on the Send to Class icon ![icon] .

3. Locate and select the documents you want to send to the class.

   • On a Mac®, use the command key on your keyboard to select nonconsecutive documents.

   • On a PC, use the CTRL key on your keyboard to select nonconsecutive documents.

4. Click Next to move on to the next screen.
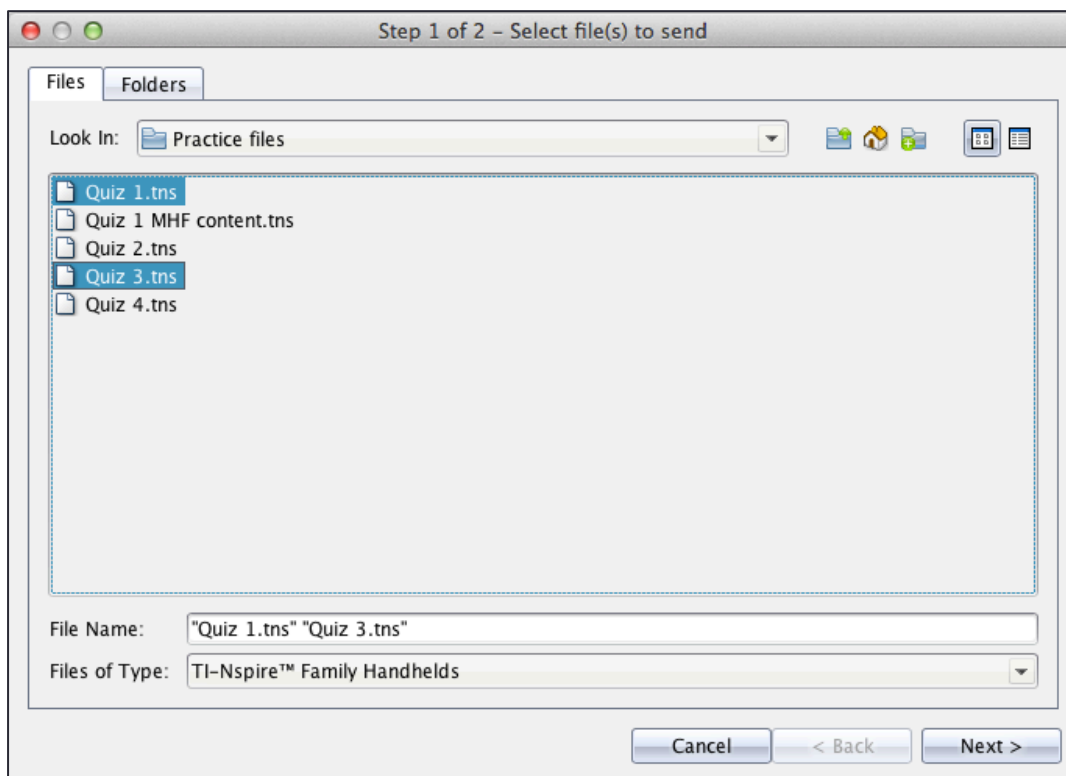
Note: If you would like to send an entire folder, click on the folder tab, and select the folder to be sent to the students.

5. Select Class Send or Individual Student(s) Send.

- If you would like to send to a subset of students only, highlight all of the desired students by using the CTRL key (on a PC) and clicking their names with your mouse, or the command key on a Mac®.

- Leave "Logged in only" check box clear.

Note: If you choose the "logged in only" option, you will not be able to use the collect missing feature.
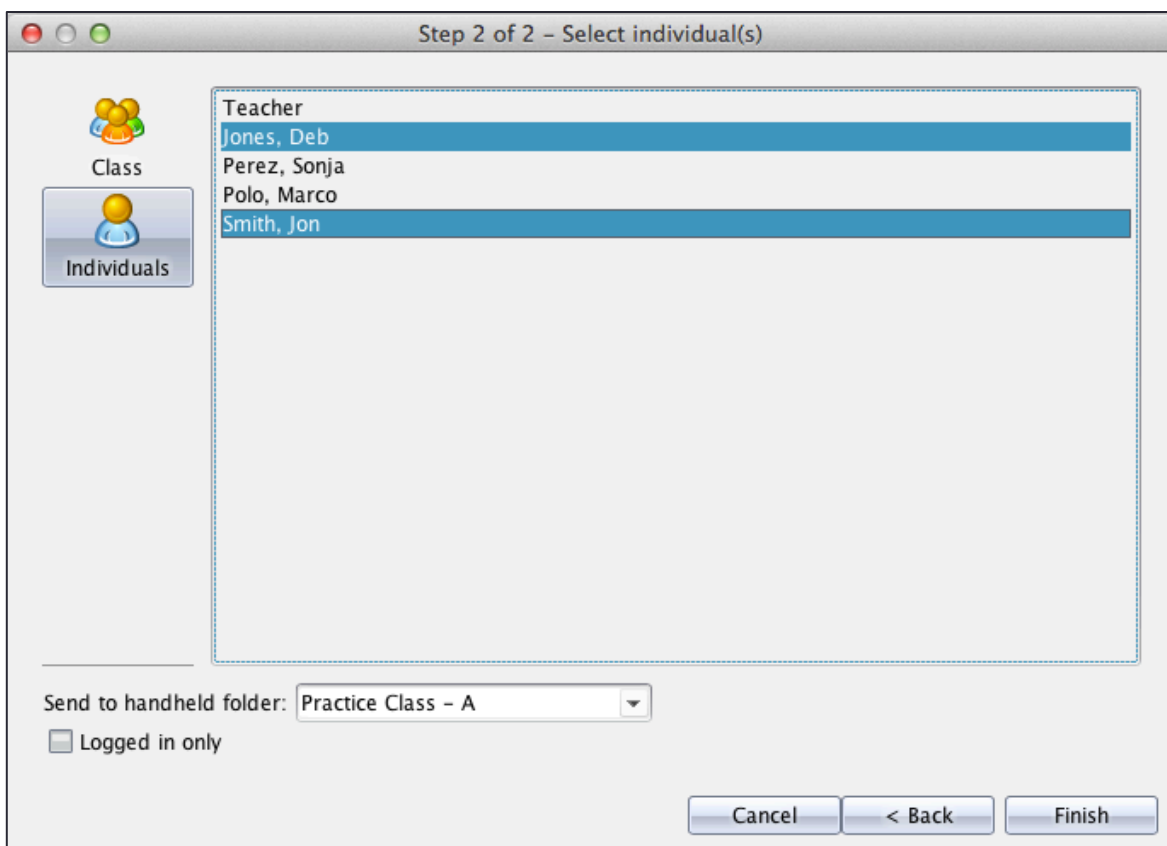

6. Select the destination folder on the handheld for the document(s).

- The default folder is the class name. Use the drop-down menu to select the folder name, or type the new folder name into the drop-down box.

7. Click Finish.

- In the Class Workspace, you will see the sent document(s) listed in the Class Record List. This line will also show how many of the students have received the documents. On the next screen, the class record shows that Jon and Deb received the document "Quiz 3".
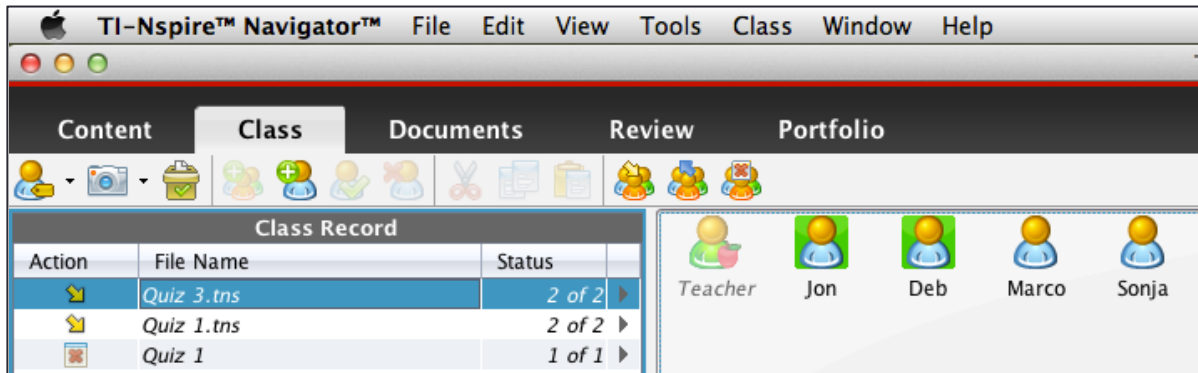
The students will receive sent documents automatically.

- All students who have already logged into the TI-Nspire™ Navigator™ class will automatically receive the documents.

- If the selected student hasn't logged into the TI-Nspire Navigator class yet, then they will receive the documents as soon as they log into the class.

- Students who receive the document will see a message on their screen.

**Verifying Transfer of Documents to Students**

1. In the Class Workspace, select the document to be verified in the Class Record.

    - The seating chart view of the class will indicate if a student has successfully received the document or has not received the document by a colored box around the student icon.

    - If the document was successfully received by the student, then the box will be green.

    - If the document was not received by the student, then the box will be red.

Note: If there was a communication problem, the student the box will be yellow. Have the student log in again.

Sending Documents from the Teacher Calculator

1. From the Home screen, press ⒉ for **My Documents**.
2. Select the document to be sent to the class.

3. Press ⇧shift followed by menu to open a menu of options.
4. Move down to select **Send**.
    - The selected document will appear in the Class Record and will be sent to the class.
    - Students who are already logged in will receive the document immediately. Other students will receive the documents as they log in.
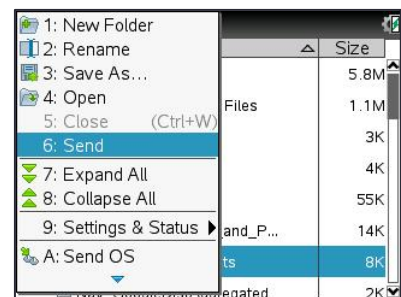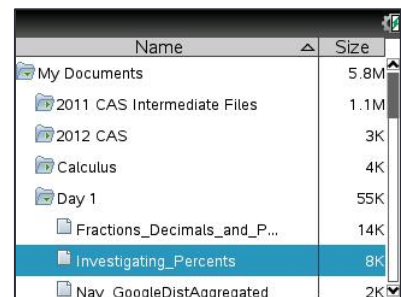
Collecting Documents

1. In the TI-Nspire™ Navigator™ Teacher Software, begin a class and have the students log in.

2. Click the "Collect from Class" icon .

3. Select the document(s) to be collected, and click Next.

   - A window will open showing you the documents that have recently been sent to the class.

   - If you want to collect more than one document from the student calculators, and then highlight all desired documents by using the Ctrl key on your PC keyboard, command on your Mac® keyboard.

   - If you want to collect a document you recently sent to the class, choose Recent Documents, and the documents that have been recently sent will be listed for your convenience.
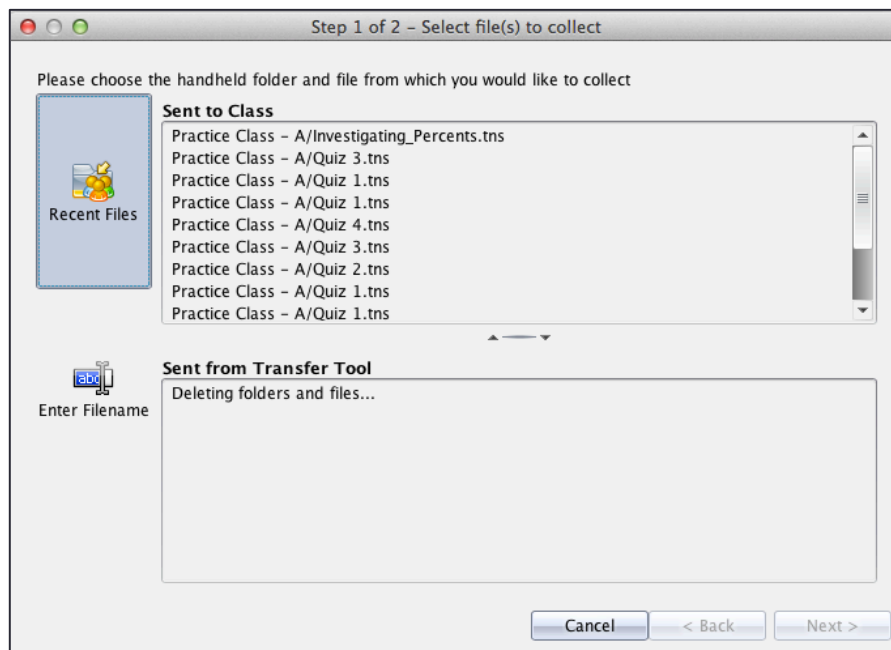
4. Select the whole Class, or select an Individual Student(s), using the Ctrl key on a PC or command key on a Mac® to select nonconsecutive students.

   - By choosing to collect from the entire class with the **Logged in only** option checked, you will only collect the document(s) from students who are currently logged into the class.
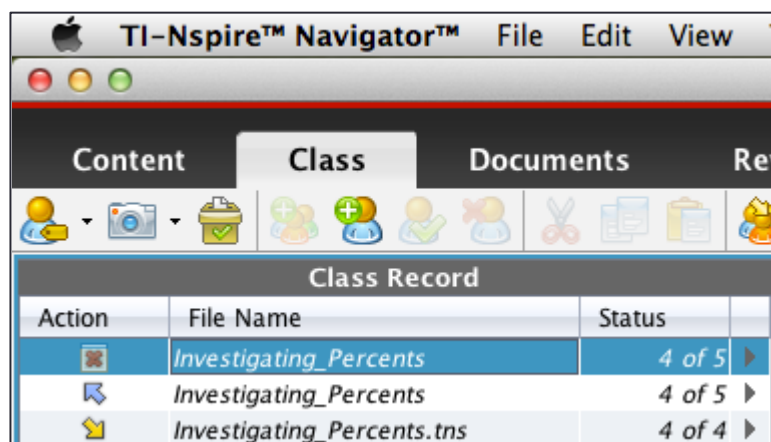
5. If you want to delete the document from the student calculators, check the **Delete from device after collecting** option.
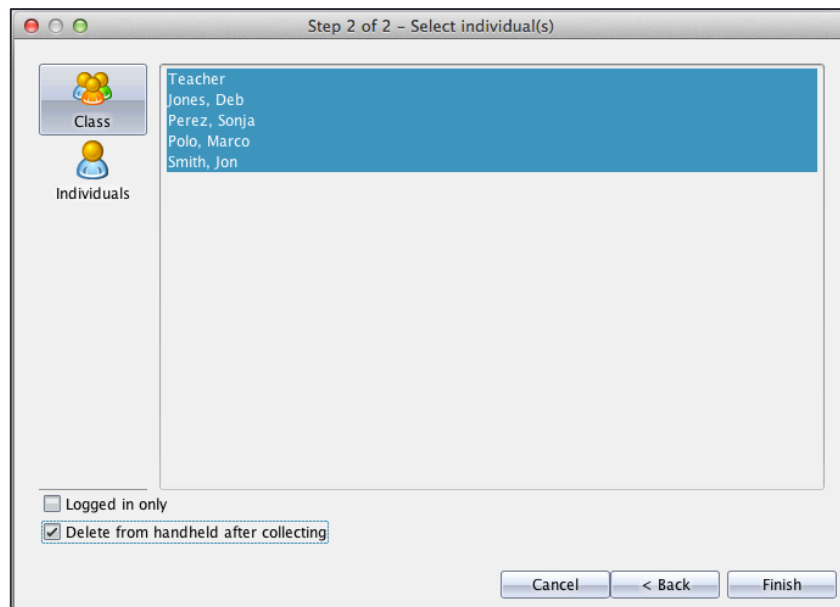

6. Click Finish.

- You will see the collected document(s) listed in the Class Record list on the TI-Nspire™ Navigator™ Class Workspace.

- This line will also show how many of the students' documents have been received.

Unprompted Documents from Class

Students can send documents to the teacher without the teacher initiating a collection from the class. When this happens, an unprompted document folder with the date sent will appear in the class record.
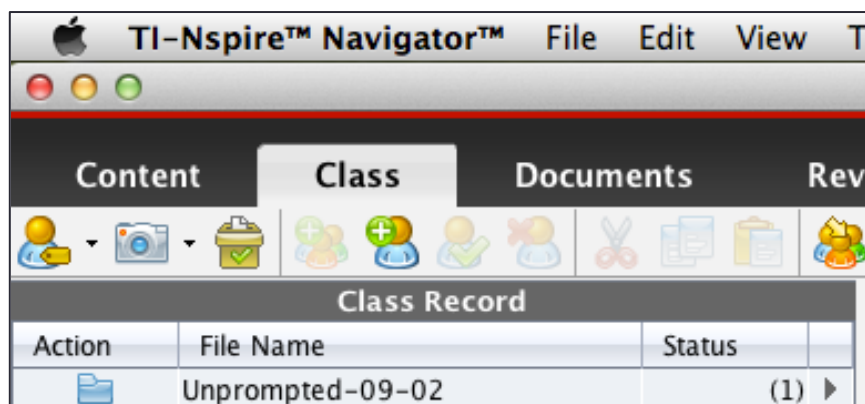
- The number in the status column tells the teacher how many documents have been sent in to the Unprompted folder.

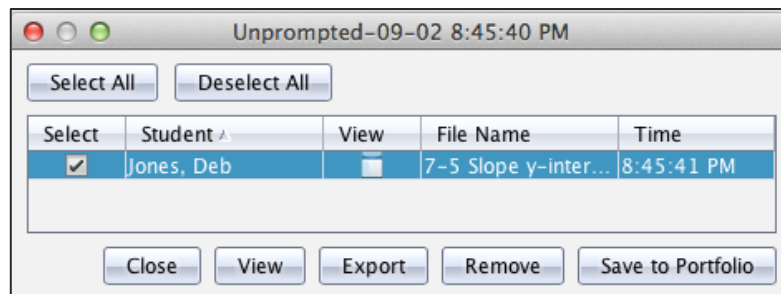- Double-clicking on the Unprompted document will open up a window that will allow the teacher to make some choices.
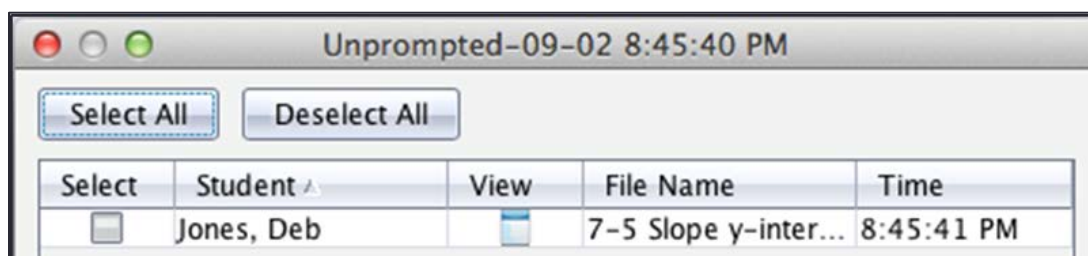
- The teacher can select all the documents of an individual student by clicking the checkbox in front of the document.

- Once you have selected documents from the Unprompted folder, options at the bottom of the window become active.

| View	Opens the document(s) in the Teacher Software.
Export	Allows the teacher to save the document to any location on the computer, a USB flash drive, or any other memory device.
Remove	Deletes the document from the Unprompted folder.
Save to Portfolio	Allows the teacher to create a new column in the Portfolio Workspace or add to a current column.

Sending and Collecting Missing Documents

1. When sending out an assessment document, **DO NOT** select logged in only option. This will allow you to send the documents out later to absent students and still include their results in the Portfolio Workspace. If the boxed is checked and there are absent students, their work will not be automatically included in in the Portfolio.
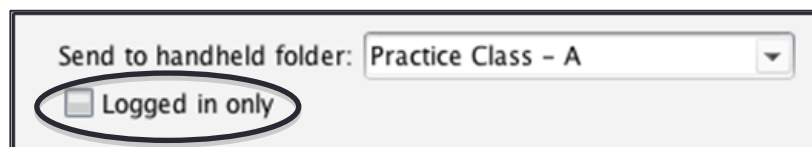
2. Send out the assessment document. In the screen below, Jon was absent.
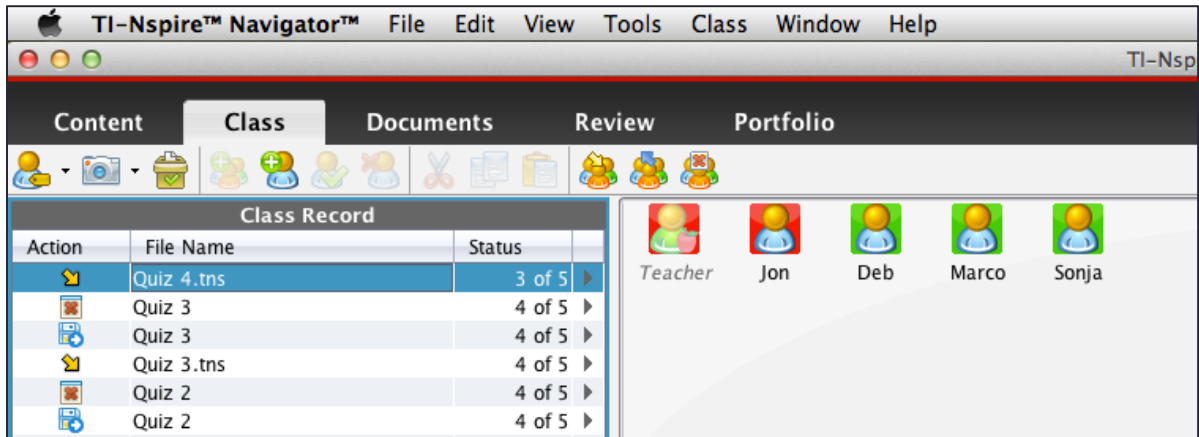
3. Collect the document from the class. The screen below shows that there is a blank space for Jon's mark in the Portfolio.
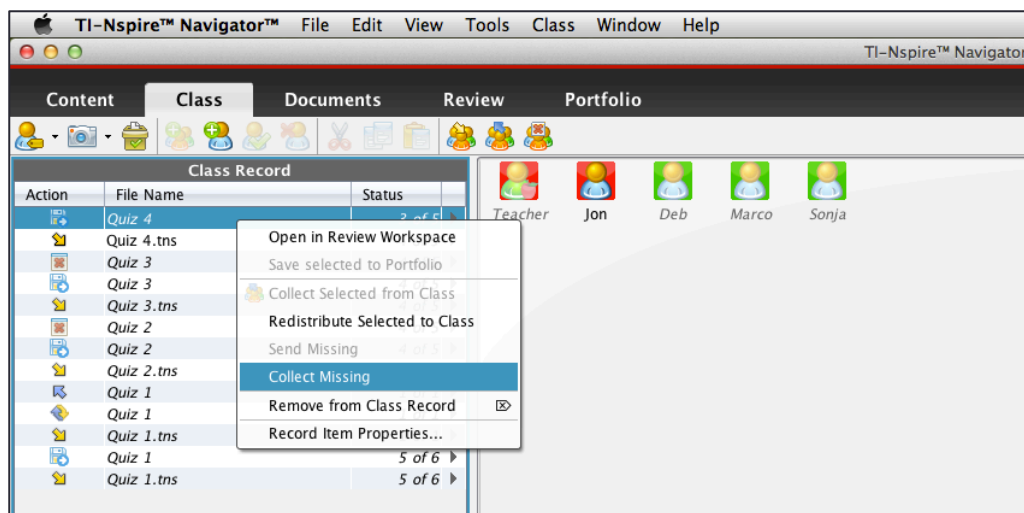

Assignment Su...	Quiz 4	Quiz 3	Quiz 2	Quiz 1	Mean Score
Column Actions					
Class Average	81%	69%	61%	40%	63%
Date	09-02	09-02	09-02	09-02	
Deb	100%	75%	78%	100%	88%
Jon		63%	56%	30%	50%
Marco	86%	63%	44%	10%	51%
Sonja	57%	75%	67%	20%	55%
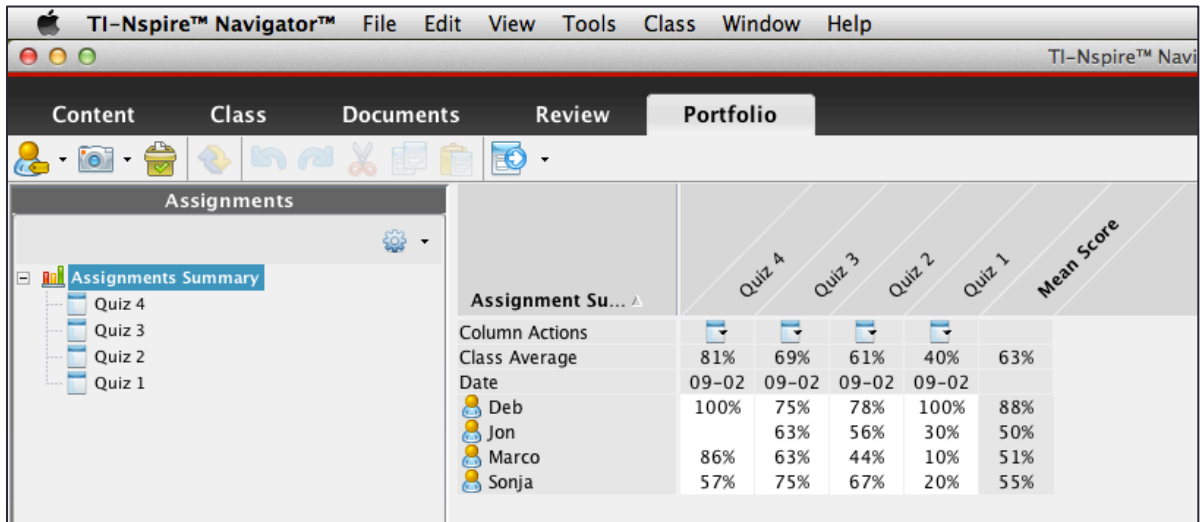
4. At a later date, the student who was absent will want to try the assessment and have their results recorded in the portfolio. Right-click on the collection entry in the Class Record and choose **Send Missing**.
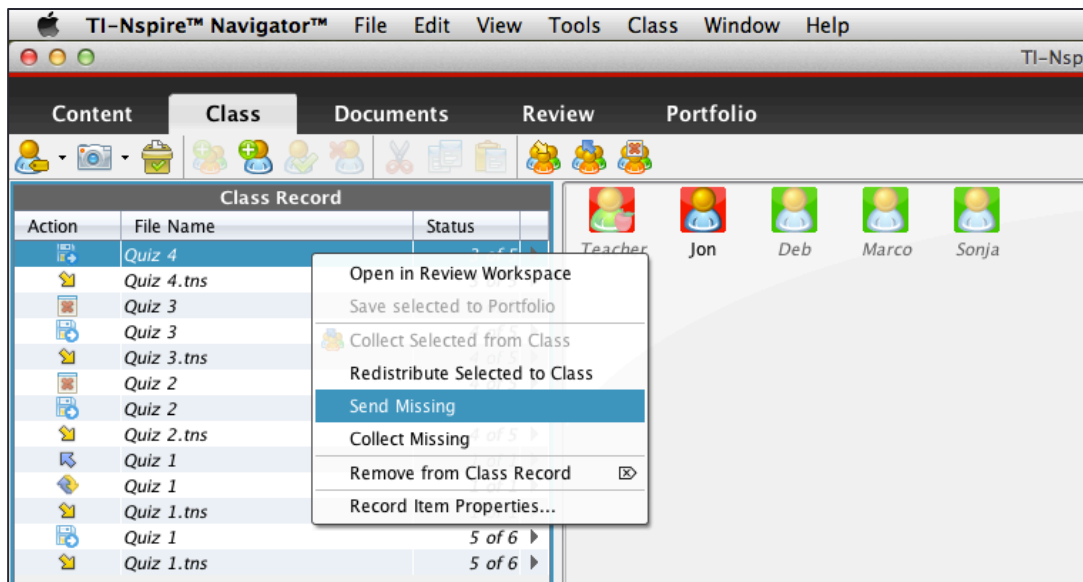
5. When the absent students have completed the document, right-click on the entry in the class record. and choose **Collect Missing**.

6. The document will be collected from the student and placed in the Portfolio column.

At the teacher's discretion, some students might be permitted to re-do a quiz. In the screen above, Marco had a poor mark on Quiz 1. The following steps describe how to permit students to re-take a test and include the results in the Portfolio.

1. Send the document out to the student who wants to re-take the assessment.

2. When the student has finished the assessment, collect the document.

3. In the Class Record, right-click on the collection item, and choose **Save selected to Portfolio**.
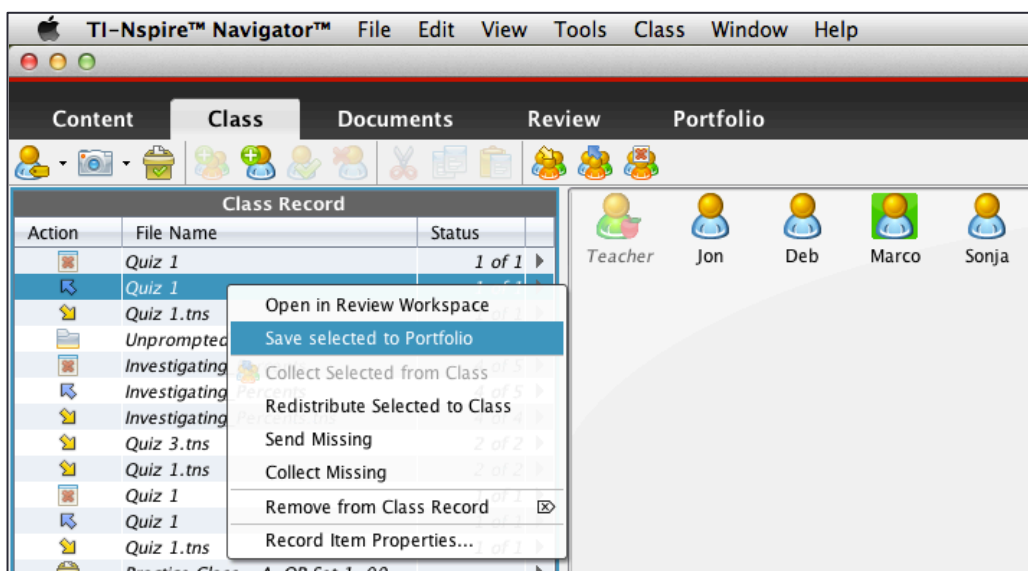
4. When the "Save to Portfolio" box appears, click on the option **Add to existing portfolio column**, and use the drop-down box to select the correct column in the Portfolio.
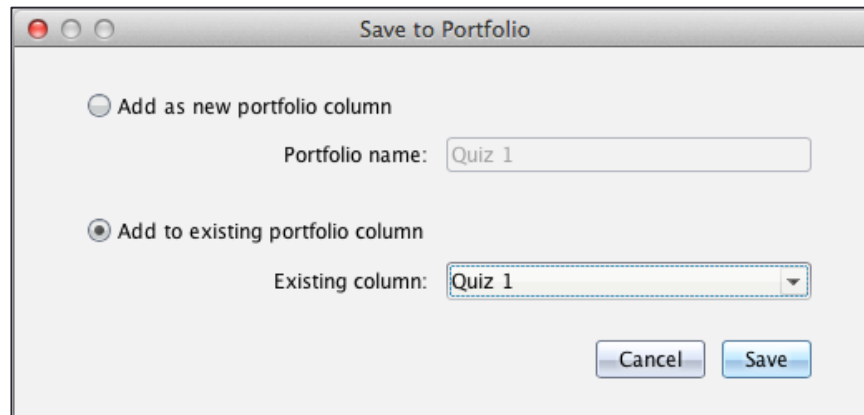
5. Select **Replace All**.
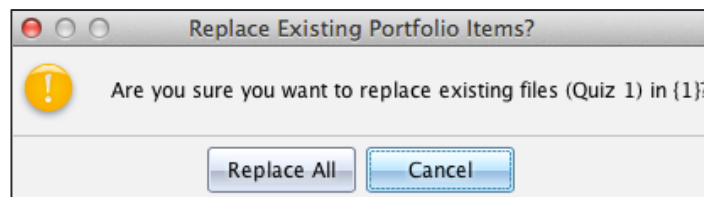
- The Portfolio shows that Marco's grade has been updated.

Redistributing Documents to Students

Often you will find that students in your class are not able to complete an activity by the time class ends. When the TI-Nspire™ Navigator™ System collects a document, it retains an association of each document collected with a student in the class. The TI-Nspire Navigator System allows you to re-distribute documents to the class at a later time.

1. Right-click on the collection line in the class record and choose Redistribute Selected to Class.

Note: The TI-Nspire™ Navigator™ Teacher Software will locate the students' documents and send them back to the students' handhelds based on their log in usernames. The students do not have be using the same handheld as they had when the document was first collected.

These actions can be taken as many times as necessary.
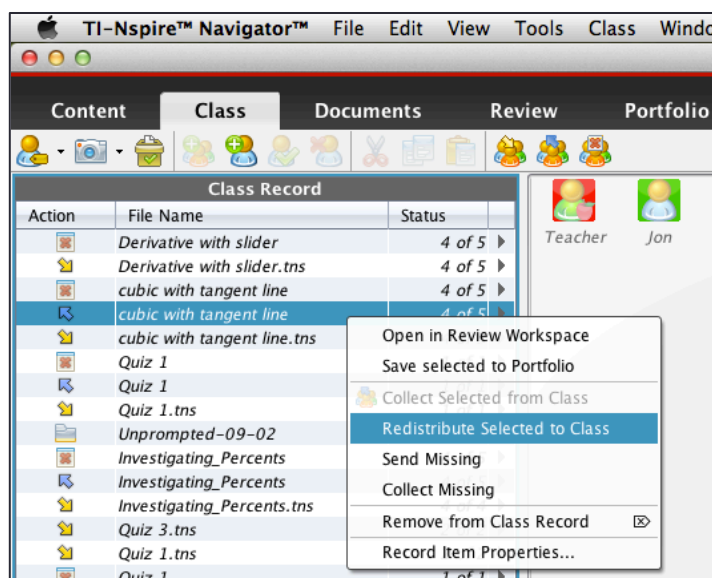
A new line will be added to the class record for the redistribution.
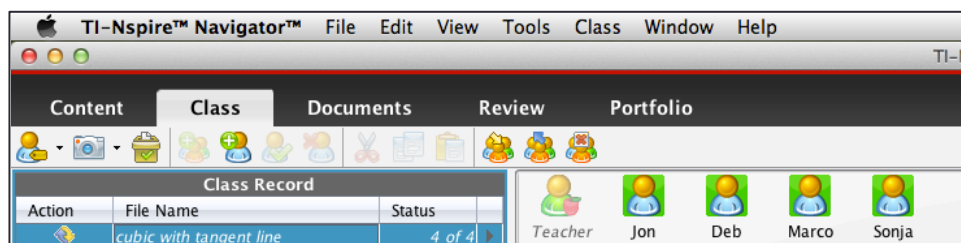
Deleting Documents

1. Documents can be deleted as they are being collected by checking the correct box.

2. Click on the Collect from Class icon .

   - A dialog box opens. By default, the dialog box shows a list of documents that have been sent out to the class either through the Send To Class option or through the Transfer Tool.

3. Select the document(s) that you want to delete from student handhelds, and click Next.
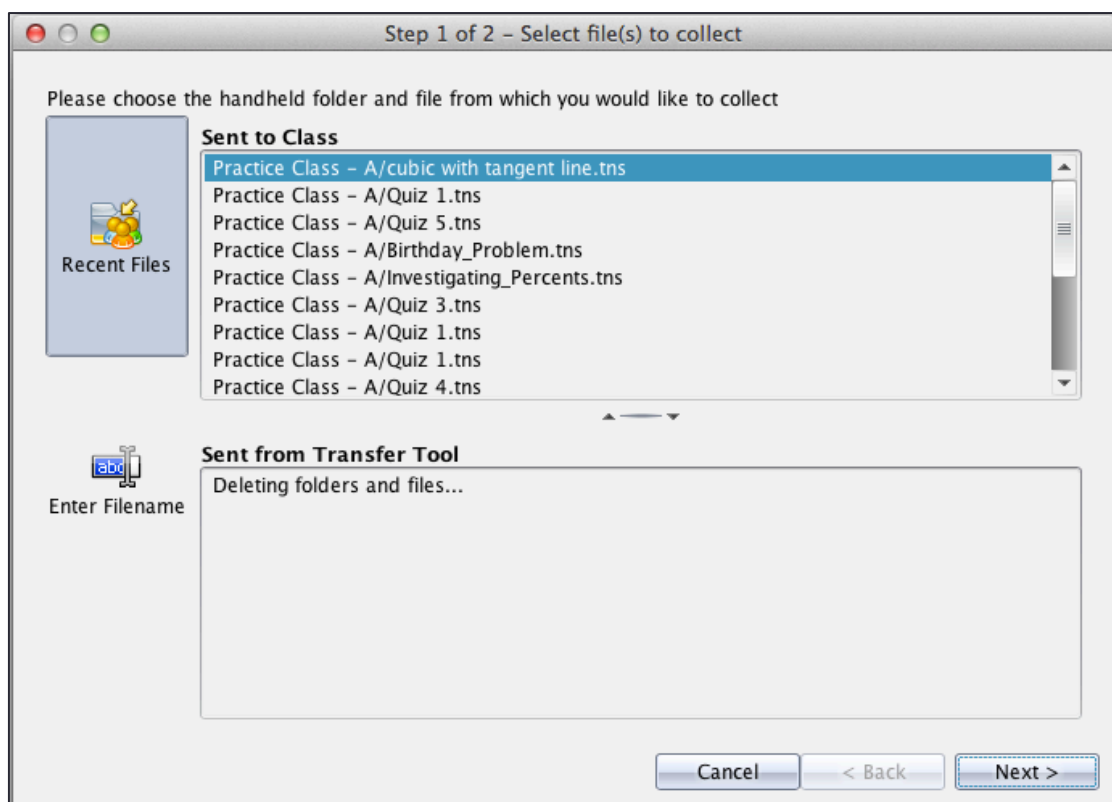
4. Select student handhelds from whom to delete documents.

- By default, all students in the class are highlighted. If you want to select individuals, use the Ctrl/command key and click on students' names.
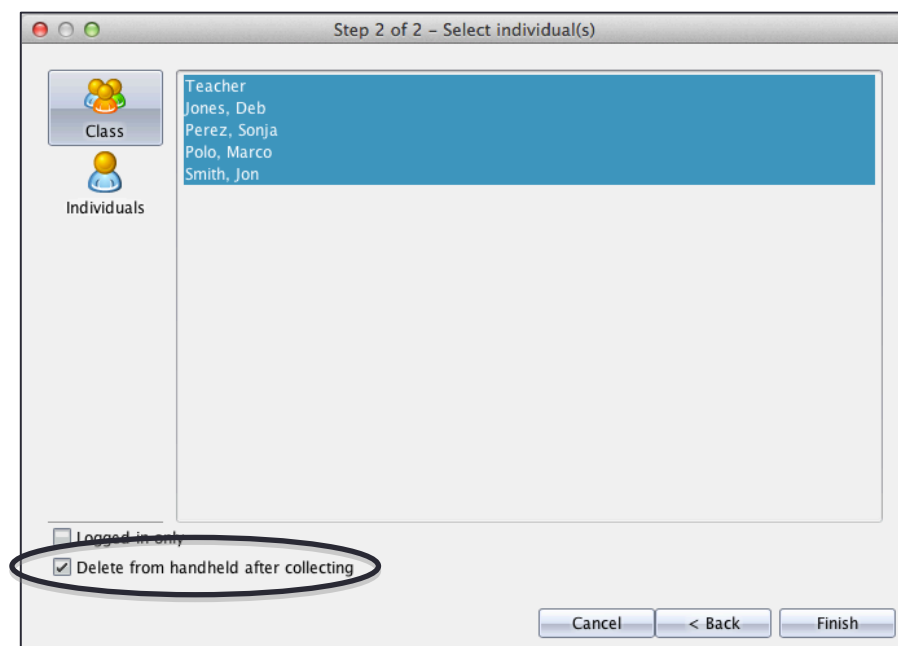

5. Be sure the check the box entitled **Delete from handheld after collecting** is checked and click on Finish.

6. Alternatively, you can select the Delete icon if you do not need to keep the students' documents.

- A dialog box opens allowing you to select documents to be deleted from student handhelds.
- By default, this dialog box lists the documents that have recently been sent to or collected from the class.

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7. Highlight the documents for deletion, and click Next to complete the action.
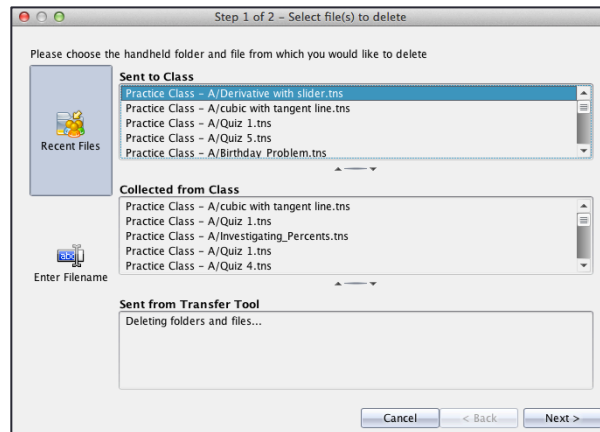
8. Another dialog box opens showing all of the students' names highlighted.

   - If you want to delete from the entire class, simply click on Finish. If you only want to apply this action to students who are logged in, there is a check box for that purpose.

   - Or, you can use the Ctrl/command key and your mouse to highlight names of individual students.

9. Click Finish to complete the action.

Where Is My Student Work Stored?

When the TI-Nspire™ Navigator™ Teacher Software is installed onto your computer, it automatically creates folders for storage of student work. When collected from the student handhelds, the student documents are nested inside these folders.

1. To find the student work on a PC, you start with the folder **My Documents**.

2. Inside of the My Documents folder, you will find a folder called **My TI-Nspire Navigator**.

   - To find the student work on a Mac®, you start with the **Documents** folder.

   - Inside of the Documents folder, you will find a folder called **My TI-Nspire Navigator**.

3. Every time you create a new class, the TI-Nspire Navigator Teacher Software will create a new **Class Folder** specifically for that class.

4. Inside the class folder is where **student documents** are automatically stored when they are collected by the system.

5. If you want those documents to be stored in the Portfolio, there is a **Portfolio** folder inside the class name folder.

Note: If you delete a class, the Teacher Software will delete the student documents in that class folder.

Listed below is the order in which folders are nested when a class is created and student work is saved in **My Documents > My TI-Nspire Navigator > [*Class Name*] > Portfolio**.
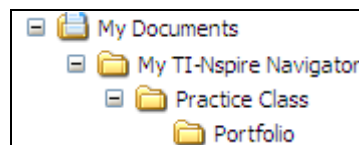
Note: The *Class Name* folder is the only one that will be customized when you create the class in TI-Nspire Navigator. The screen to the right shows the hierarchy of folders for a PC. The folders on a Mac® would show a similar structure.

Tips for Using the Class Folders and Student Work

- You can copy the *Class Name* document folder and take the information out of your classroom to review.

- You have the ability to make comments on student work and redistribute your comments to each student.

- You can view documents to monitor student progress to meet the needs of all students.

- You can decide who needs remediation or intervention.

- The review of student documents will help shape your lesson plans for the next class period.

- At the end of each grading period, you might want to move the documents from the Portfolio folder and store the student work in another location. You now can start the new grading period with an empty Portfolio.

- The types of student documents and information stored in the *Class Name* folder are TI-Nspire™ documents, Quick Polls, and Class Captures.

Note: When saving a recording from Live Presenter, you will be asked where to save the document. You will want to save it to a location that you can easily find later.

# Using the Review and Portfolio Workspaces

The Review Workspace

The TI-Nspire™ Navigator™ Review Workspace enables you to:

- Review and analyze student answers for a selected TI-Nspire™ assignment.
- Review each question followed by a display of how each question was answered.
- Based upon this display, you might want to either review certain topics or re-teach them to ensure student understanding.

Viewing an Assignment

1. After collecting an assignment, look for the line corresponding to that collection in the Class Record.
2. Right-click on the assignment name, and select **Open in Review Workspace**.
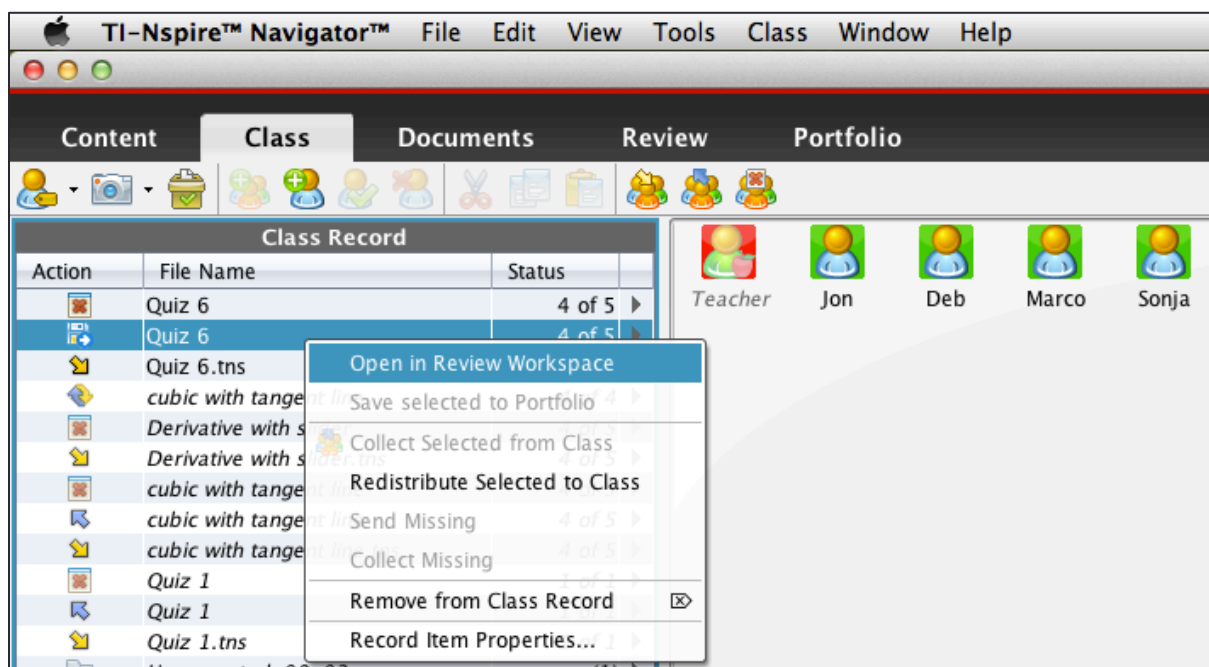
- The selected assignment is opened in the Review Workspace, one of the five tabs in the TI-Nspire™ Navigator™ Teacher Software.
- The Review Workspace displays the class' response to a quiz using a master document for the assignment. The master document is the document that was sent out to the class.
- The Review Workspace opens in Page Sorter view showing thumbnails for all pages in the document and all of the results.
- For each page that contains a question, a second entry will follow the question in the Page Sorter. This is where the students' responses to that question are displayed.
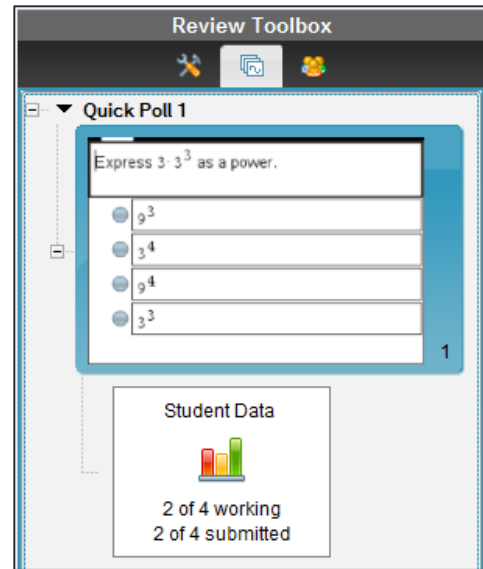
3. In the Page Sorter, click on the first entry that is entitled "Student Data".
   - This display shows the question and a bar indicating the number of students who chose that response.
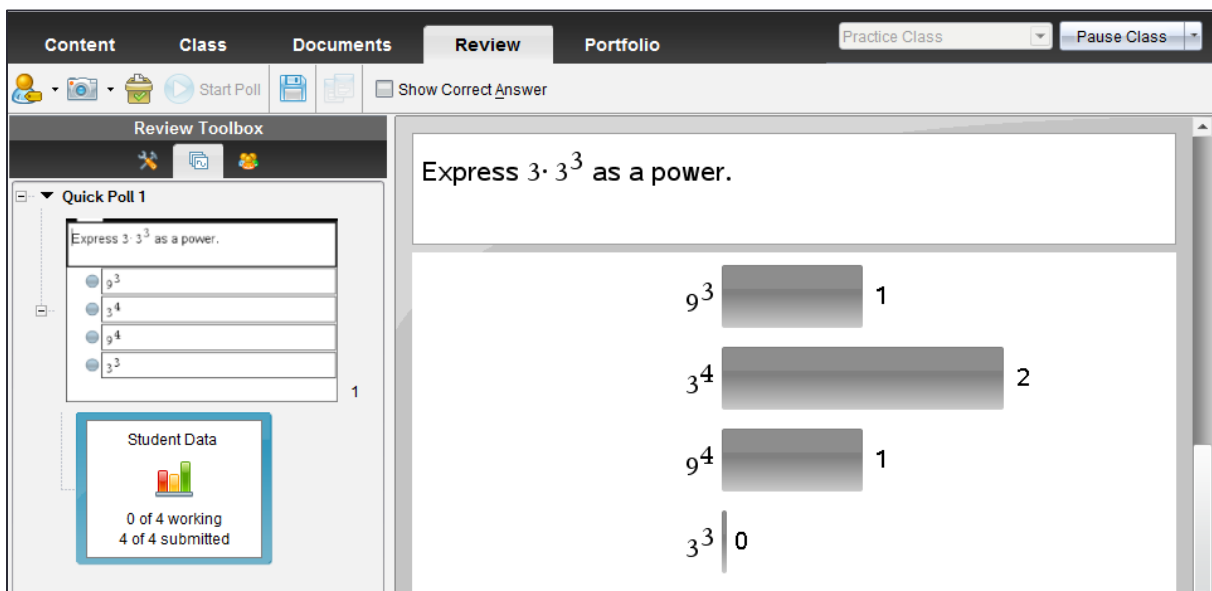
4. At the top of the window, click the check box to display the correct answer.
   - The bar for the correct answer will now be displayed in green.
   - Teachers use this feature in different ways. Some teachers prefer to have this box checked all the time so that the correct answer appears when the display is presented. Other teachers prefer to leave this unchecked and discuss the question before checking the box.

5. Pass your mouse over any of the bars, and a caption will appear showing the names of students who chose that response. This feature should be used carefully so as not to embarrass students.

The Portfolio Workspace

The Portfolio Workspace gives you a way to save, store, review, and manage electronic documents your students send to you. Documents that you save in the Portfolio remain there until you remove them.

The Portfolio tab displays a list of students in the selected class and the scores they have received for each assignment that has been included in the Portfolio.

- In the following screen, the Assignments Summary is highlighted in the left pane.
- When the Assignments Summary is highlighted, all of the recent quizzes, plus the average for each student will appear in the right pane.
- The date and class average for each quiz is shown above the student information.

In the next screen, a quiz has been highlighted in the left pane, opening the Single Assignment View. When a student's score for an individual question is highlighted, the student's response is displayed.

Saving an item to the Portfolio

You can save (add) collected TI-Nspire™ documents and Quick Poll results to the Portfolio.

To save an item to the Portfolio from the Class Record, right-click to highlight the document, and select **Save Selected to Portfolio**.

Sorting Information in the Portfolio

1. Click the column header of the list you want to sort.
   - The TI-Nspire™ Navigator™ Teacher Software sorts the selected list. A menu of choices will appear.
2. Choose either **Sort Ascending** or **Sort Descending**.
   - Sorting according to the grade on any item allows you to see how well the class did on that question or assignment rather than visually sorting through them to find out how many students were successful and how many were not successful.
3. If you want to sort the selected information in the opposite order, click the column header again.
4. Note that in the following screen, another Portfolio item has been added. The icons at the top of the header indicate that the item is either a TI-Nspire document or a Quick Poll.
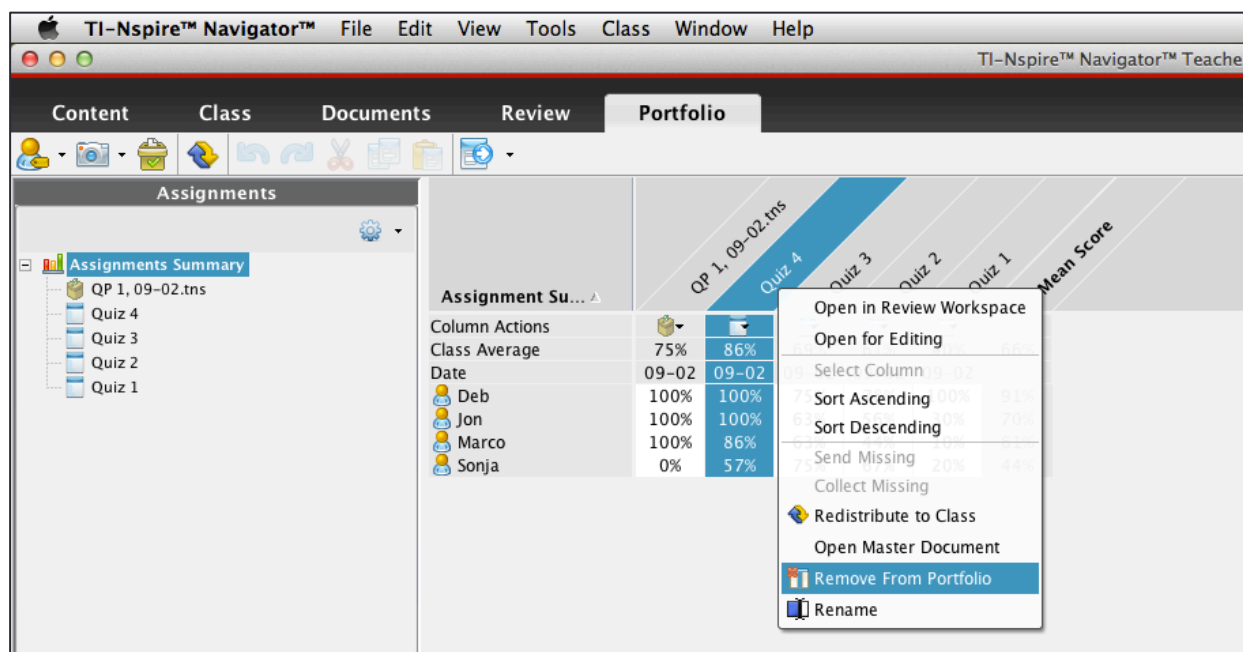
Deleting Documents from the Portfolio

There might be times you want to delete documents from Portfolio. For example, a student turned in a Quick Poll document before it was completed, and the low grade gives a false class average; or an incorrect document was sent to or collected from a student.

Right-click to highlight the document, and select **Remove From Portfolio**. You will get a caution screen asking you to confirm the action.

Note: If a document is saved to the Portfolio and later deleted from the Class Record, that delete action does not affect the document copy in the Portfolio. The copy remains in Portfolio until it is deleted.

Editing Grades in the Portfolio

There might be times when you decide to change the grade for a student on one assignment. Find the score that needs to be changed and right-click on that score.

The field for the student's grade will now be open and you can edit that grade to any value that you deem appropriate. In this case, Sonja's mark on this assignment has been changed to 50. The overall average for Sonja, the average on the quiz, and the Mean Score for the class all change accordingly.
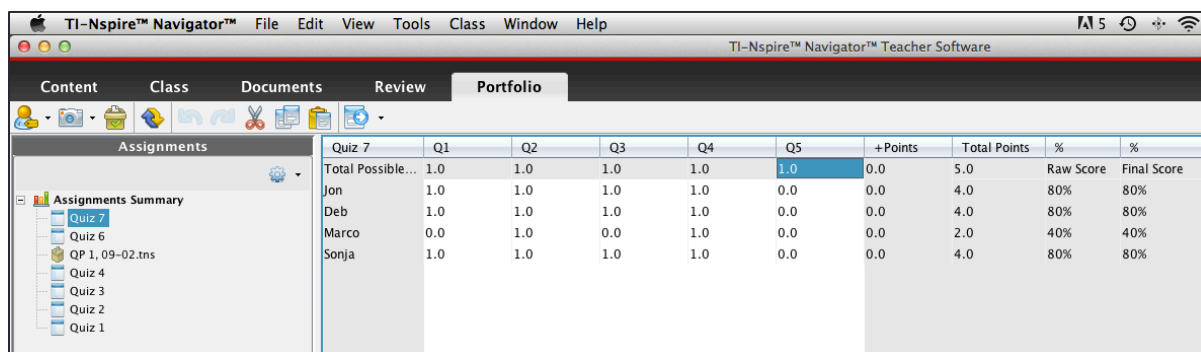
Using Single Assignment View

The TI-Nspire™ Navigator™ Single Assignment View tool enables you to:

- Review and analyze student answers for a selected TI-Nspire™ assignment.
- View a class summary. These views are available from tab selections in Single Assignment View.
- Include grades from open response questions in the analysis, and give partial credit or extra credit for answers of any question type.

1. Go to the Portfolio Workspace by selecting the Portfolio tab.
2. In the Assignments pane on the left, clicking on any of the assignments launches the Single Assignment View screen.
   - In the example below, the teacher clicked on Quiz 7. Reviewing the results, it appears that all four students got question 5 wrong.
   - This could represent a problem in understanding on the part of the students, or it is possible that the answer was recorded incorrectly in the master document. In case the latter is true, follow the steps below.
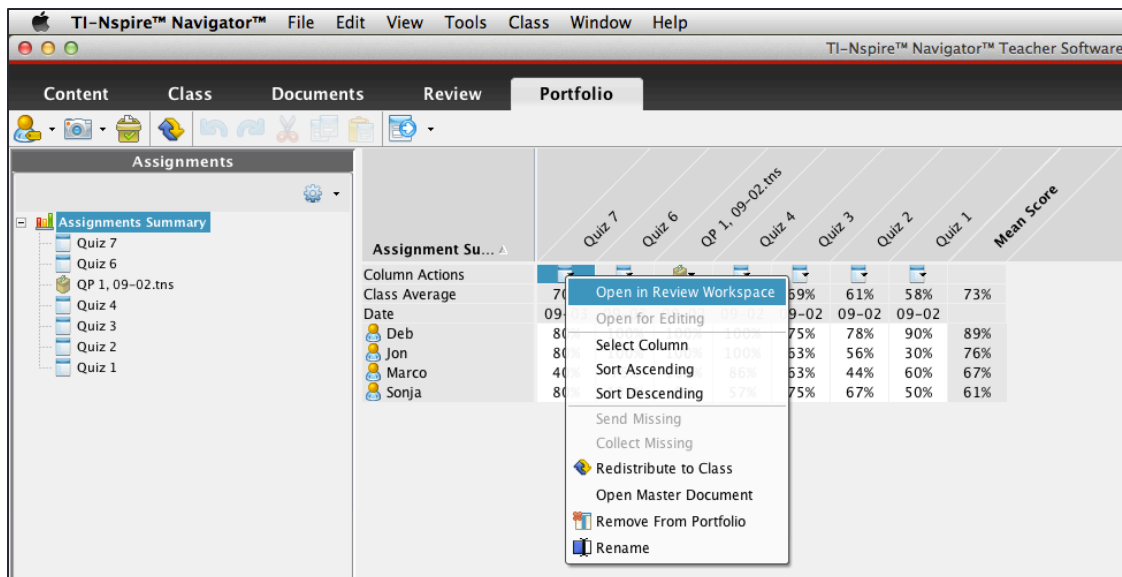
3. First, go back to the document, and make the change.

4. In order to update the Portfolio, click on the Assignments Summary to show the Portfolio.

5. Right-click on the document icon for Quiz 1, and choose **Open In Review Workspace**.

- The original document used to grade the assignment will be opened in the Review Workspace. Advance to question 5. It appears that the teacher selected the wrong answer. The correct answer should have been -12x + 14, not -12x – 14.
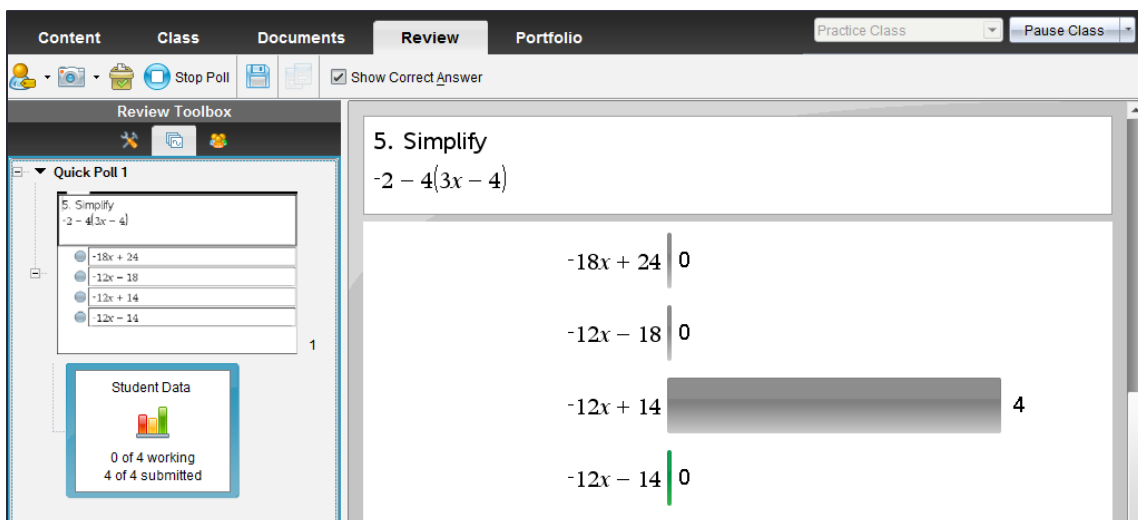
6. Right-click on the bar for -12*x* + 14, and choose **Mark This Response Correct**. The bar will change from gray to green.

7. Return to Single Assignment View, and notice that the scores for this question have all been updated.

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Grading Open Response Questions

In the Assignments Summary, you can see that some questions are not graded. These are open response questions where the answer that the teacher provides is only a suggestion. Due to the nature of the question, students could enter a variety of responses, many of which could be correct, or acceptable to the teacher. Question 5 is such an example.

1. In the Assignments Summary, right-click on the document for Quiz 6, and choose **Open in Review Workspace**.

2. Move to the review field. Three of the four student responses are acceptable.

3. Right-click on each of the bars for these responses, and choose **Mark This Response as Correct**.
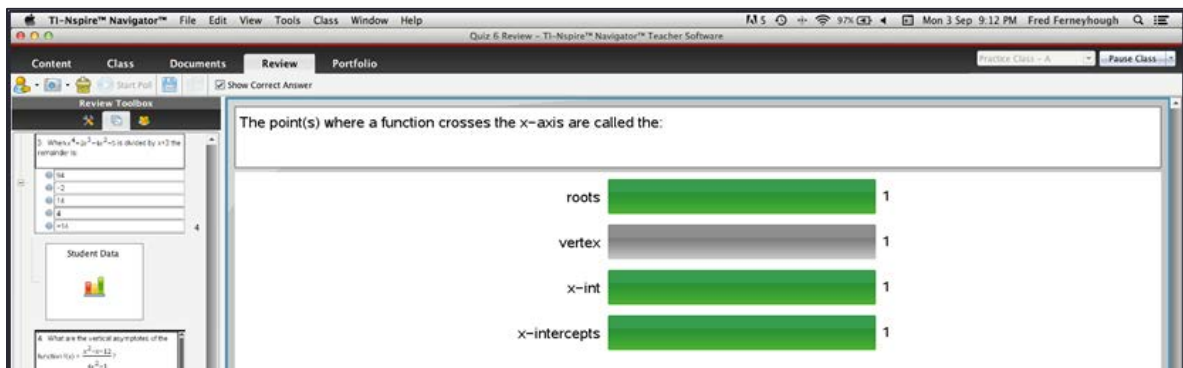
4. Return to the quiz where it can be seen that the grades have been altered.

Changing Scores

1. Occasionally, teachers might want to change a mark for a student. In the Single Assignment View window, find and double-click on the mark to be changed.

2. The field will open, and you can change the mark to any value that you choose, including a decimal.

Aggregation of Data

Analyzing Data through Quick Poll

One powerful feature of the TI-Nspire™ Navigator™ System is the ability to conduct a Quick Poll where students enter data that contributes to a relationship.
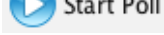
1. Launch Quick Poll , and choose Lists for the Question Type.
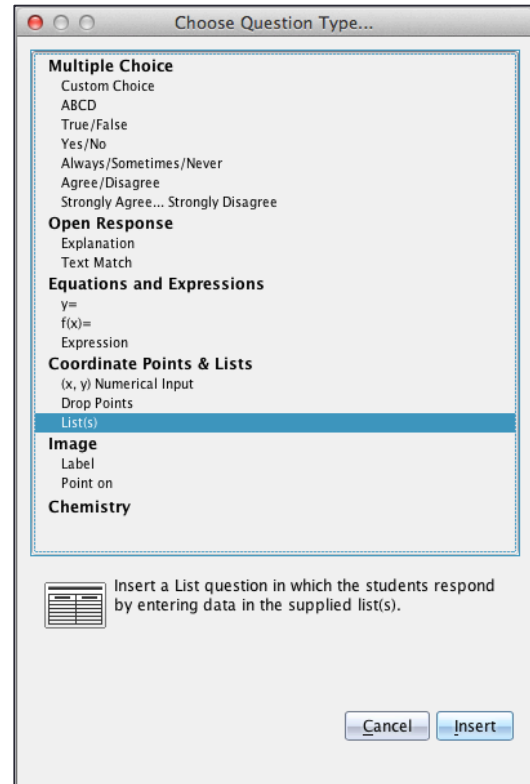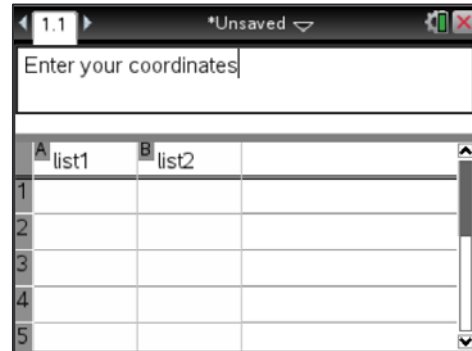
2. The Documents Workspace will open with a split screen. The lower pane is a Lists & Spreadsheets page. The teacher can enter a prompt in the upper pane providing students with some indication of what they are to enter.
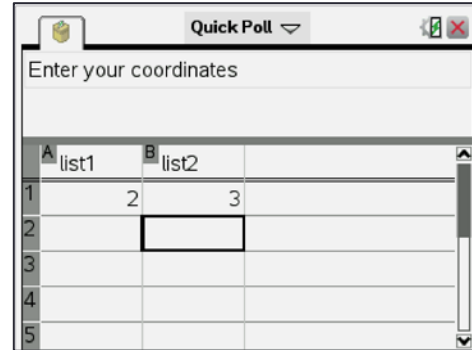
3. For this exercise, students will be provided with an *x*-value and will be told to determine the *y*-value for *y* = 2*x* -1. These will be their coordinates.

Note: The lists could be renamed to any titles that the teacher chooses.

4. Click Start Poll ▶ Start Poll on the Teacher Software. The Quick Poll opens on the students' handhelds. They should enter their values for *x* and *y* and submit them.
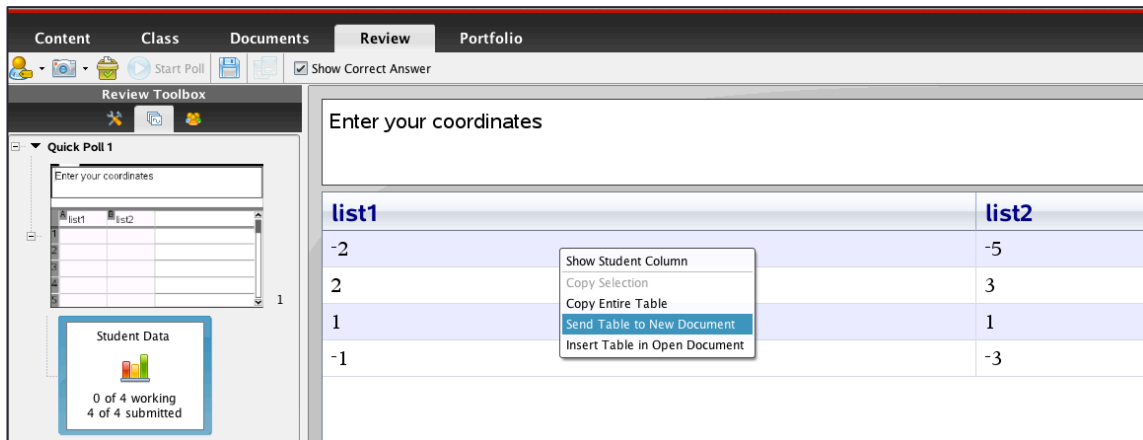
5. When each student has submitted their set, press Stop Poll ☐ Stop Poll .

   • The software now opens the Review Workspace.

6. Click on the Student Data to see the data set.

7. Right-click in the data field, and select **Send Table to New Document**.
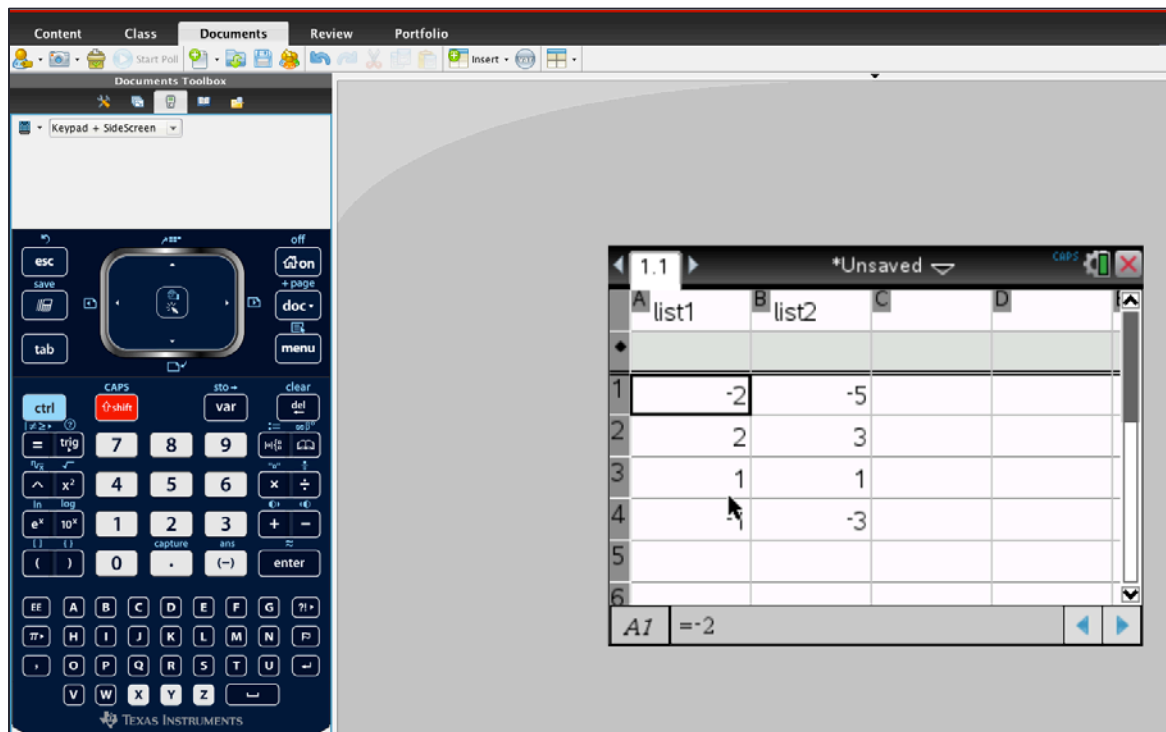
8. Since the Quick Poll type was Lists, the data from the Review page is opened in a Lists & Spreadsheet page. Click on [icon] to send this new document to the class.

9. When students receive the document, they should create a Scatter Plot using List 1 as the independent variable (or *x*) and List 2 as the dependent variable (or *y*).

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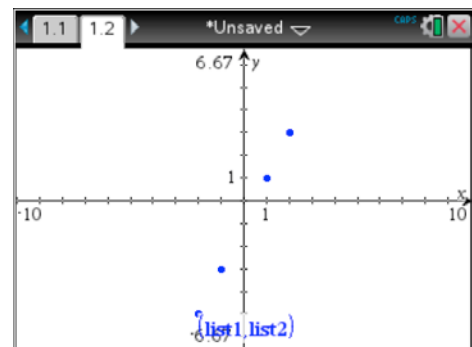
The Press-to-Test Feature

Enabling and Disabling Press-to-Test

One powerful feature of TI-Nspire™ Technology is the ability to restrict access to features on the handheld for use with assessment. Some districts, states, and tests require these restrictions.

1. To enable Press-to-Test on the TI-Nspire CX™ handheld, first ensure that the handheld is turned off.
2. Press and hold [esc] and [⌂ on] together until the Press-to-Test screen appears.

The handheld will display an opening screen for Press-to-Test. By default, Press-to-Test disables several features and pre-existing Scratchpad data, documents, and folders.

3. The angle settings can be changed by pressing [⌨] and selecting the appropriate setting.
4. By default, all of the commands and features listed are disabled. To enable a feature or command, uncheck its box.
5. Press [tab] to **Enter Press-to-Test**, and press [enter] to leave the Press-to-Test set-up screen.
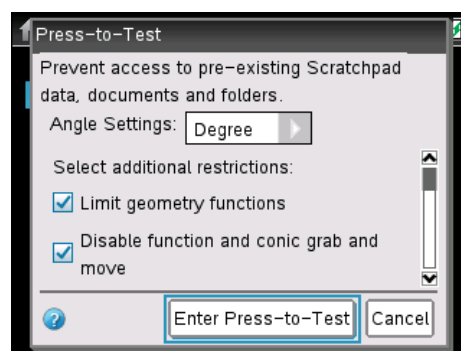
Once Press-to-Test is enabled, the handheld reboots. A dialog box confirms that the handheld is in Press-to-Test mode and the restrictions are listed.

6. Click **OK**, or press [enter].
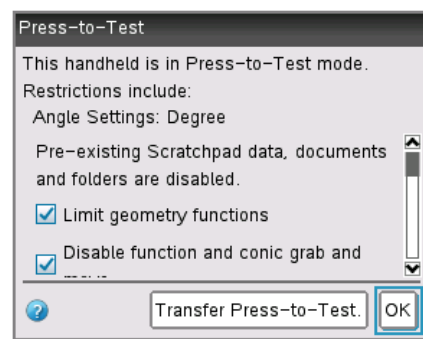
7. When Press-to-Test is enabled, the LED at the top of the handheld begins blinking.

- Green indicates that all restrictions are selected (default), while yellow indicates that one or more restrictions are unselected.
- During the initial reboot, the LED alternates between red and, depending on the restrictions, either green or yellow.

- The lock icon at the top of the handheld screen indicates that Press-to-Test is enabled.

8. Create a new document, add a Geometry page, and press `menu`.

- Since geometry functions are limited, observe that the **Measurement**, **Construction**, and **Transformation** menus are not accessible.
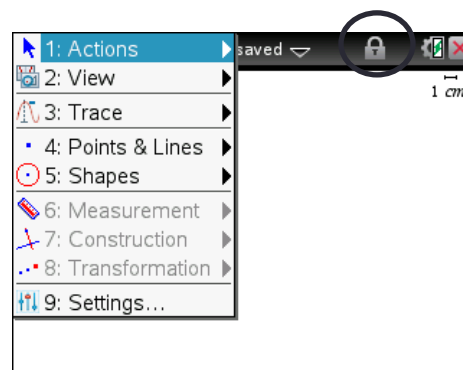
9. Add a Calculator application by pressing `doc▾` and selecting **Insert > Calculator**.

10. Type **cot(π/2)**, and press `enter`.

- Since trigonometric functions are limited, an error message appears. The dialog box tells students how to access additional information about the restrictions.

11. Click **OK**.
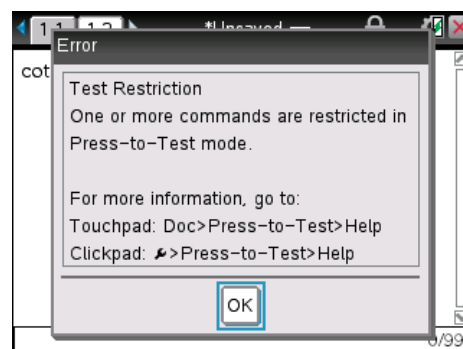
12. Go to My Documents by pressing `⌂on` **> My Documents.**

- When Press-to-Test is enabled, a Press-to-Test folder is created in My Documents. All other folders and documents present on the handheld before Press-to-Test mode was entered are inaccessible.
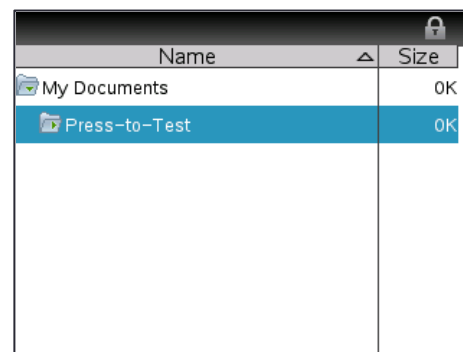
13. Press-to-Test can be disabled by connecting two handhelds using the handheld-to-handheld USB connection cable.

14. While the handhelds are connected, press doc▾ and select **Press-to-Test > Exit Press-to-Test**.

- A handheld in Press-to-Test mode can be disabled regardless of whether the other handheld is in Press-to-Test mode.
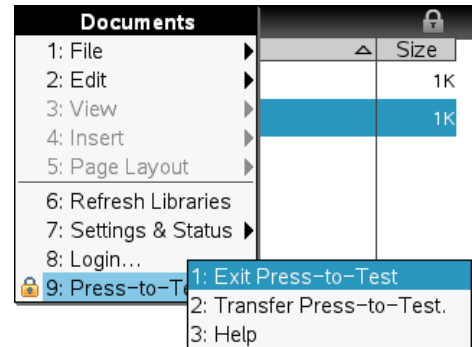
Alternatively, Press-to-Test can be disabled with TI-Nspire™ Navigator™ Teacher Software by creating a TI-Nspire™ document named **Exit Test Mode.tns**, saving it to the computer, and transferring it to connected handhelds. The document can contain any TI-Nspire™ application, and its content does not matter. However, the document must be named **Exit Test Mode.tns**.

15. Select **Tools > Transfer Tool**.

16. Click **Add to Transfer List** and locate the document Exit Test Mode.

17. In the Transfer List, select **Exit Test Mode**.

18. In the Edit Destination Folder, select the Press-to-Test folder, and click **Change**.

Then click **Start Transfer**. All connected handhelds will reset.
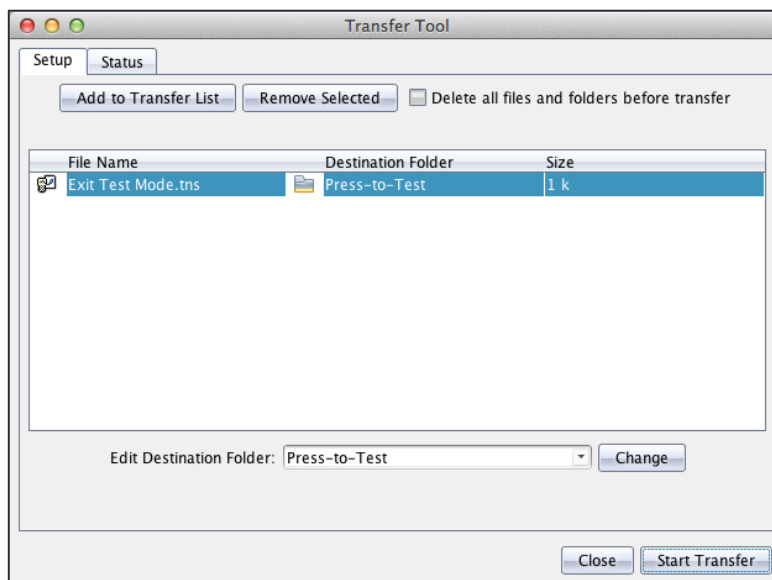
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Frequently Asked Questions and Equipment Tips

The following information will help you solve any issues you might encounter while using the TI-Nspire™ Navigator™ System. For more details, refer to the TI-Nspire Navigator Guidebook or call **1-800-TI-CARES**.

Frequently Asked Questions

1. Classes

Why can't I create a class? *Why can't I select a class?*	You cannot create or select a class because you have a class session running. If you need to create or select a class, you must first end the running class session.
How many characters can I use in my class name?	A class name can have 3 to 32 letters and/or numbers.

2. Document Transfers

Why won't the Teacher Software let me change my default file location?	A class session is running. The default file location can only be changed if a class session is not running.
Why can't I send or collect documents?	A class session has not been started. Network tasks cannot be performed until a class session is started.
When I send documents to my students' handhelds, where are the documents located on the handhelds?	Documents sent to the TI-Nspire™ handhelds go to the My Documents folder on the handheld Home screen, separated into folders by their class name. To access the documents on the handheld, press 【doc▾】.
Where does the Teacher Software store the unprompted documents I receive from my students?	By default, unprompted documents are stored in **My Documents\My TI-Nspire Navigator\[Class name].**, The default location can be changed if necessary.

3. The Quick Poll tool

Is there a text length limit for questions?

Yes. Questions cannot contain more than 249 characters.

Why haven't my students received the poll I sent them?

Either the students are not logged in to the network, or their handhelds are not securely connected to the wireless network adapters.

Why can't I send poll results to my students?

You cannot send poll results to your students because you have not stopped the current poll. You must stop the current poll to send poll results.

The poll is an Open Response poll. You cannot send the results of an Open Response poll to your students.

Why did the open poll on my computer close?

The open poll might have closed because you started a new poll from your handheld. If you start a new poll on your handheld, the open poll on the computer closes and the new poll from your handheld opens.

4. The Class Capture tool

Can I capture the screens of students who aren't currently logged in?

Yes. Students are included in a screen capture if they have logged in at least once during the class session, even if they are not currently logged in.

Why is there a yellow outline around a captured screen?

The yellow outline indicates that the screen did not refresh.

Why is there a yellow screen with the words "Communication Error" in it?

This indicates that the TI-Nspire™ Navigator™ System cannot find the student on the network. The student's handheld might have disconnected from the wireless network adapter

5. Students

Why can't I see a student's icon?	Another students' icon might be on top of the icon you are trying to find.
If I delete a student from a class, can I later restore the student to the class?	It depends on whether or not the student is also in other classes. If the student is in other classes, then you can restore the student's information to the class by copying him or her to the class. If the student is not in other classes, then the deletion is permanent.
Why can't I edit a student's information?	You can't edit your students' information because they are logged in to the TI-Nspire™ Navigator™ network.
Why can't I delete a student?	You cannot delete the student because the student is logged in to the TI-Nspire Navigator network.
Why can't I see my students' passwords?	The TI-Nspire™ Navigator™ System hides the passwords to protect students' privacy. Though you cannot retrieve a password, you can reset it if the student is not logged in.
Can students have the same user name?	No, students cannot have the same user name, even if they are in different classes. All student user names must be unique.

6. TI-Nspire Navigator Network

Why do I get a "Cannot start a class session" error?	The system cannot locate the appropriate network hardware (for example, an access point and one or more wireless network adapters). Check your hardware connections. If you still see this error, open TI-Nspire™ Network Manager, and make sure your network hardware is properly configured.

Why does the Teacher Software say "TI-Nspire Navigator network unavailable" in the bottom right corner?	The TI-Nspire™ Navigator™ System cannot locate appropriate network hardware (for example, an access point and one or more wireless cradles). Check your hardware connections. If you still see this error, open TI-Nspire™ Network Manager, and make sure your network hardware is properly configured.

7. Teacher Preferences

What can I do if I forget my password?	If you forget your password, you can reset your teacher account password.
What can I do after logging in to the TI-Nspire Navigator network from my handheld	After you log in to the TI-Nspire™ Navigator™ network from your handheld, you can send documents to students or collect documents from students

TI-Nspire™ Navigator™ Equipment Tips

1. When setting up the TI-Nspire Navigator System, the most reliable sequence is to plug the Access Point into the computer before starting it.
2. If you need to remove the Access Point from the computer, always eject it from your system tray to insure that it will most likely be found again when you plug back in.
3. Do not shut the lid on your computer while running the TI-Nspire™ Navigator™ Teacher Software. This has been known to cause problems with losing the USB port and, as a result, the Access Point. If this happens, shut down the computer (do not restart it) and unplug the Access Point. Then plug the Access Point into the computer and start the computer.
4. Having your computer go to sleep while running the Teacher Software can cause it to lose the Access Point. Set your sleep mode accordingly (for example, the computer never goes to sleep while it is plugged in).
5. You cannot damage the handhelds' rechargeable batteries by leaving them in the TI-Nspire™ Docking Station beyond the time needed to fully charge them.