

Special Features for Math in Schoolnet

Audience: This document is intended for users who know the basics of how to create items and tests in the Assessment Admin module.

Several features in Assessment Admin facilitate the creation of rigorous math items:

- Gridded items
- Formula sheets
- Equation editor
- Online rulers, compasses, protractors, and calculators—known collectively as tools and “manipulatives”

Create a Gridded Item

Gridded items require a student to respond with his or her own answer, rather than selecting one from a list of pre-defined options.

To create a gridded item:

1. Roll your cursor over the Assessment Admin header, and then click **Create**
2. In the **Create an Item** menu, click **Gridded**
3. Add the required subject, grade and standard alignment
4. Enter the question content
5. Enter the answer

The Answer Grid Preview shows what a correct answer should look like.

6. Optionally, increase the number of columns so that the number of places for the response does not indicate the correct number of digits in the answer

If you add more columns than are needed for a whole number, you will have the option to specify if the answer must be entered with each digit in the column corresponding to its mathematical place, otherwise students may answer flush left or flush right.

7. Enter the number of points the item is worth
8. Depending on the answer, you may have additional options:
 - Prepopulate the decimal point
 - Show negative sign
 - Show fraction
 - Show decimal point
 - Fraction must be entered exactly as shown here
 - Allow x as a correct answer
9. If students will test in TestNav, you have the option for students to enter their answer in a text box rather than a bubble grid
10. Add any additional item details and be sure to preview and save your new item

Add Formula Sheets to an Item

To make a reference document available to students on an online test, attach a formula sheet when creating or editing an item. You do not need to enable any additional test or item settings, since the button for formula sheets in test items will always appear where they are attached.

To attach a file to an item during the item creation process:

1. Click **Upload** under Formula Reference Sheet

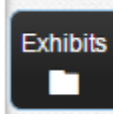


Special Features for Math in Schoolnet

2. Navigate to and select the desired file
3. Click **Open**

The file is attached and will be available to students.

- In TestNav the link appear on the right on the page



- In Schoolnet Test Tunnel the link is in the top-right

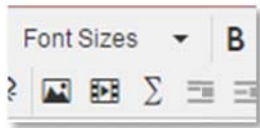


Use the Equation Editor to Build Items

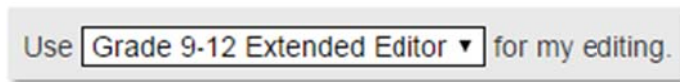
When creating items, use the equation editor, located in the text editor, to add equations.

To create a math equation:

1. Click inside a content box to make the text editor appear
2. Enter desired text and place the cursor where you want the equation to appear
3. Click the Sigma (Σ) icon in the content editing window

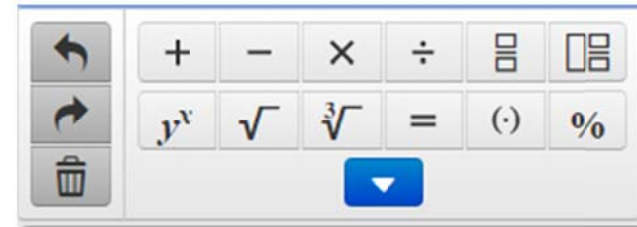


4. Choose an equation set for editing



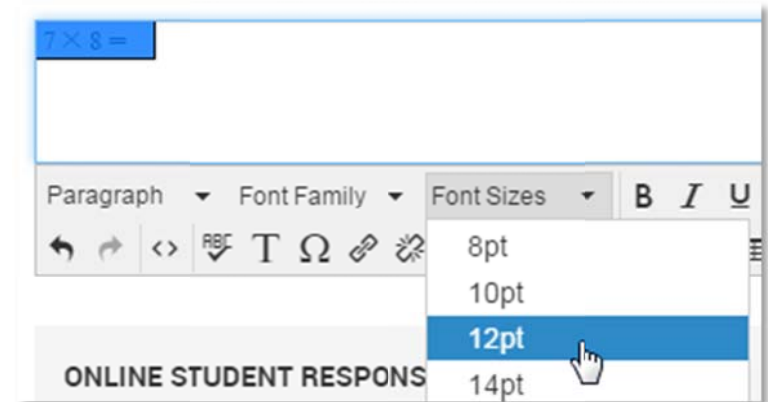
Different options appear depending on your selection.

5. Select a function



You can type numbers or letters in the placeholder squares.

6. Click **Save**
7. You have the option to highlight the equation to change the font size, font color or return to the editor.



Include Tools and Manipulatives

You can make any combination of tools and manipulatives—rulers, calculators, a compass, protractor, and equation editor—available to students who take an assessment online. You can make the tools and manipulatives available per item or for an entire assessment.

When enabled on a test, images will not be scaled to a different size by the system; they will display at the same resolution at which they

Special Features for Math in Schoolnet

were inserted into the test. This ensures that measurements are accurate.

Test item creators are responsible for making sure that images are scaled correctly on printed tests for which students will use their own tools.

Previewing Items and Tests with Manipulatives

When you preview individual items, understand the available choices:

- Tools & Manipulatives (Image scaling off) – use this option if students will test in the Schoolnet Test Tunnel and the item includes an image that will be measured with a ruler or compass
- Without Tools & Manipulatives (Image scaling on) – Tools and manipulatives will not display in the preview, regardless of the item's settings
- In TestNav Environment – All tools and accommodations will be shown when you preview items, not just those selected; preview the entire test in TestNav to view the test as students will see it

Enable or Disable Tools for an Entire Test

You can set up a test to include or disable tools and manipulatives for all items. By doing so, you will override any item-level settings. You can make this test-level setting either while creating a test or by modifying the settings of an existing test in the Test Properties section.

To adjust item settings on the Create page:

1. Click **Test Item Defaults**
2. To override the setting for the equation editor on open response items, in the Open Response Text Formatting section, choose Simple Text to disable the equation editor

completely or select Use Rich Text Formatting and select Equation Editor to enable for all items

Also specify which set of equations to provide.

The screenshot shows the 'Open Response Text Formatting' settings panel. It includes a note '(not compatible with screen readers)'. There are three radio button options: 'Use Item Settings', 'Use Simple Text', and 'Use Rich Text Formatting' (which is selected). Below these is a checked checkbox for 'Enable Equation Editor' and a dropdown menu currently set to 'Grade 6-8 Editor'. Under the 'Schoolnet Only' section, there are three unchecked checkboxes: 'Enable Special Character Palette', 'Enable Spell Check', and 'Enable Grammar Check'.

3. For Enable Tools & Manipulatives, select Yes to enable tools and manipulatives for all items regardless of item settings

If you select Yes, choose the features to make available to students.

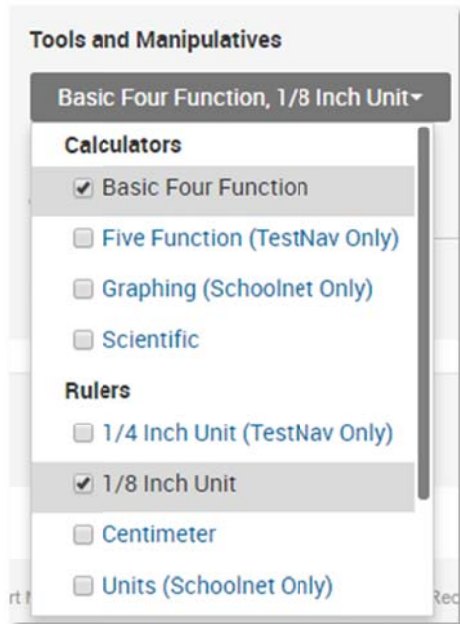
The screenshot shows the 'Enable Tools & Manipulatives' settings panel. At the top, there are three radio button options: 'Use Item Settings', 'Yes' (which is selected), and 'No'. Below this, there are three sections of checkboxes: 'Rulers' (with '1/8 Inch Unit' checked), 'Calculators' (with 'Basic Four Function' checked), and 'Tools' (with 'Compass (Schoolnet Only)' and 'Protractor' checked). Other options like 'Centimeter', '1/4 Inch Unit (TestNav Only)', 'Units (Schoolnet Only)', 'Five Function (TestNav Only)', 'Scientific', and 'Graphing (Schoolnet Only)' are unchecked.

Special Features for Math in Schoolnet

Enable Tools for Individual Items on a Test

If only some items should have tools and manipulatives, enable them at the item level as needed. When creating a test with these items, select **Use Item Settings** on the Create page. Only the tools enabled for each specific item will be available to students.

Scroll down to view all tools.



Student Online Experience

Depending on what features are enabled, students will see additional tools when testing online.



Schoolnet Test Tunnel example



TestNav example

Equation Editor

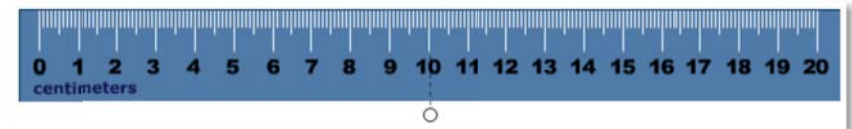
For open response items enabled with the equation editor, students testing in the Schoolnet Test Tunnel will see the Sigma (Σ) icon to open the equation editor.



In TestNav, the equation editor appears automatically if enabled.

Ruler

In both TestNav and the Schoolnet Test Tunnel, students can Schoolnet, students can drag the ruler around the screen and rotate it.



Schoolnet Test Tunnel: rotate with the center small circle



TestNav: rotate with the circle on either end

Special Features for Math in Schoolnet

Calculators

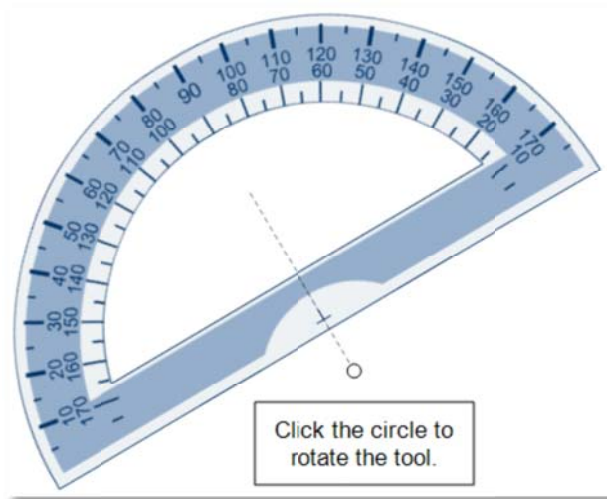
Note that if you make a calculator available for one item, students could navigate to the item to use it for other items for which it is not enabled.

The following calculators can be made available:

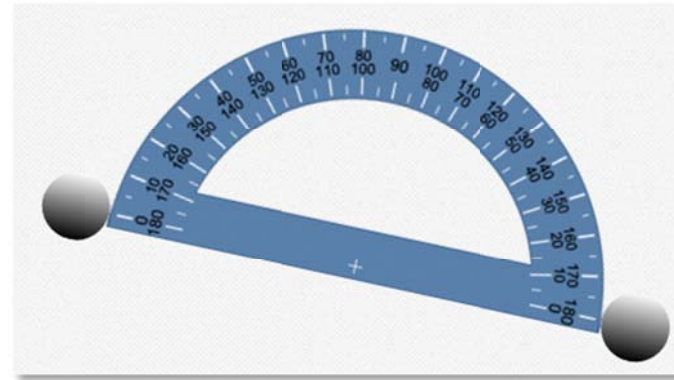
- Schoolnet Test Tunnel - basic four function, graphing and scientific
- TestNav - basic four function, five function and scientific

Protractor: Schoolnet Test Tunnel

To move the protractor, students click and drag it.



Schoolnet Test Tunnel: rotate with the center small circle



TestNav: rotate with the circle on either end

Compass: Schoolnet Test Tunnel

The Compass is only available for the Schoolnet Test Tunnel.

For the compass, students will use the three circles to move, rotate, draw, and resize the compass. Students can make temporary marks on their screens, which are not captured in results. They will clear the marks by clicking the trash can icon on the manipulatives toolbar.

