

This worksheet explains how to format math in your worksheet.

[Math Fonts](#)

[Inline Division](#)

[Mixed Numbers](#)

[Customizing Operator Display](#)

Note: These exercises require you to work in the Worksheet window. To do so, choose **Select All** from the **Edit** menu. Then, either drag or copy and paste all the regions into your Worksheet window.

Math Fonts

For math, there are two default font styles that determine how expressions look: **Constants** and **Variables**. The Constants style affects numbers. The Variables style affect letters in math equations. Click on the x below to see the information displayed in the **Formatting** toolbar. If you can't see the toolbar, choose **View > Toolbars** and be sure **Formatting** is checked. Then click on the 5 to see the constant style.

x 5

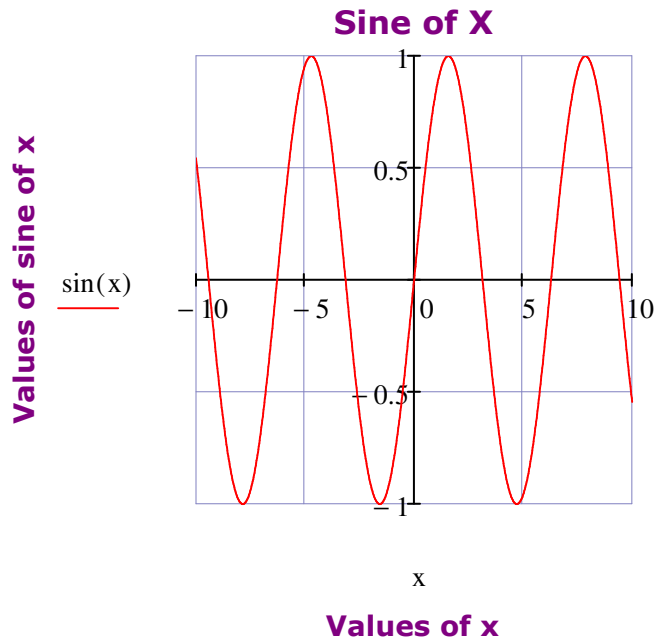
To change the font for Variables or Constants:

1. Choose **Equation** from the **Format** menu.
2. Choose **Variables** or **Constants**.
3. Click **Modify** and pick the font, font style, size, and color.

You can also click on a number or letter in an equation and make changes to the style directly in the **Formatting** toolbar. Notice that when you change one of these styles *all* the numbers or variables in your worksheet change their font.

Additional Equation Styles

Math Text Font is the style for labels on a graph. You can modify the style by selecting **Equation** from the **Format** menu. In the graph below, the Math Text Font is modified to bold purple.



Adding Math Styles

You can also create your own math styles that can be applied to individual equations.

To add an equation style:

1. Select a variable or number.
2. Choose **Equation** from the **Format** menu.
3. Select User 1.
4. Select Modify and specify the settings for your new font style.

You can rename a style in the New Style Name Field. For instance, you may want to create a style named Vector to apply a bold font to all of your vectors.

The new style is available in the drop-down menu on the **Formatting** toolbar whenever you click on variables or numbers in a math region.

Variables defined in different font styles are considered to be different variables. For instance, the variable x in the Vector font style is a different variable from x defined in the Variables font style.

$$x := 2 \quad \mathbf{x} := \begin{pmatrix} 1 \\ 2 \\ 3 \end{pmatrix}$$

$$x^2 = 4 \quad \mathbf{x}^2 = \begin{pmatrix} 1 \\ 4 \\ 9 \end{pmatrix}$$

Inline Division

The inline division operator lets you simplify or shorten the display of complicated division expressions. Enter the inline division operator by typing **[Ctrl] [/]** or clicking the Inline Division button on the **Calculator** toolbar.

$$\frac{(5X)^2}{X^2 - 1} \div \frac{15(X - 1)}{X^2 - 2X + 1} \div \frac{X^3}{X - 1}$$

Mixed Numbers

You can enter a mixed number or display a result as a mixed number. To enter a mixed number either click the Mixed Number button on the **Calculator** toolbar, or type **[Ctrl] [Shift] [=]**.

To display a result as a mixed number:

1. Click on a result and choose **Result** from the **Format** menu.
2. On the Number Format page, choose Fraction under Format.
3. Check the "Use mixed numbers" option and click OK.

$$1 \frac{2}{5} \quad \text{a mixed number}$$

$$2 + \frac{4}{5} - \frac{1}{2} = 2 \frac{3}{10} \quad \text{a mixed number result}$$

To Customize Operator Display

There are several special operators necessary for calculations in the context of Mathcad. For example, in order to define a variable, you must use the definition (colon) equal sign like this:

$$x := 1$$

However, you may not want to show a colon equals in a presentation or a printed document that you distribute to people who are not familiar with Mathcad. Using custom operator display settings, you can change the look of these special operators.

To change the way an operator is displayed:

- Right-click on the operator, choosing "View Operator As," and select a display option from the menu, which changes that operator only, or
- Choose **Worksheet Options** from the **Tools** menu and adjust the settings under the **Display** tab to change all operators in a worksheet.

By saving a worksheet as a **template**, you can also set the display for new documents. This feature is for display and printing purposes only, so the meaning of the operator remains intact. If you click in the region you see the original operator. If you click out of the region, the custom display setting is restored.

You can control the display of the following operators:

- Derivative (regular and partial)
- Multiply (dot, narrow dot, large dot, x, thin space, no space)
- Literal Subscript (large and small)
- Definition (:= and =)
- Global Definition (\equiv and =)
- Bold Equal (= or =)

Below are some examples of customized display. Right-click on each to change the setting or see what other options are available. When you click on an expression, you see the underlying operator.

$f(x) = x^2$ Definition symbol reformatted to equals

$g = \cos(x)$ Bold equals reformatted to equals

$w = 23$ Global definition symbol reformatted to equals

$2 \times d$ Dot multiplication reformatted to an **x**