

Step-by-Step Creating a Document in StudyWorks


StudyWorks is a powerful math-oriented word-processing application. You can use it to write up homework assignments and projects. This Step-by-Step Card provides an introduction to this program.

Opening StudyWorks

- 1** Open the StudyWorks application. A blank document and the Resource Center window appear.
- 2** Click the close box in the upper-left corner of the Resource Center window to close that window.

Entering text

You can place text anywhere in your document. To enter text, follow these steps:

- 1** Click the location in your document where you want text. The red plus symbol marks the location.
- 2** Click the Insert Text Region button  on the toolbar at the top of the screen.
- 3** Type the text you want.
- 4** Click outside the text box when you are finished.

Formatting text

There are several formatting options available for text. You can change the font, size, color, and style (such as bold or underline) of the text. To format text, follow these steps:

- 1** Select (highlight) the text you want to format. If you want to format all of the text in a document, do not select anything.
- 2** Choose Text from the Format menu.
- 3** To change the font, size, or color of the text, select the option you want from the appropriate pop-up menu in the Font dialog box.
- 4** To make text bold or italic, choose the style you want from the Style pop-up menu.
- 5** To add effects, such as underline or shadow, select the effect you want under Effects.
- 6** When you're done, click OK.

Using the Math Palette

The Math Palette works just like a calculator, and assists you in entering mathematical equations. By clicking buttons on the Math Palette, you can form a mathematical equation in your document.

- 1 If the Math Palette is not already visible, click the Math Palette button  on the toolbar at the top of your screen.

The following sections provide information on the kinds of equations you can enter using the Math Palette.


Assigning variables

The following are examples of assigning variables:

$$x := 5$$

$$y := x + 3$$

$$z := x^2$$

- 1 To assign a variable, click a location in your document to place the variable so that the red plus symbol marks the location.
- 2 Type the name of the variable. The name must begin with a letter, but may contain any combination of letters and numbers.
- 3 To use Greek letters for a variable name, click the Greek Letters button  on the Math Palette; then click the Greek letter you want. Click the Green Letters Palette close box when you're done using it.
- 4 Click the Assignment button ($:=$) in the lower-left corner of the Math Palette (or press Shift-colon on your keyboard).
- 5 Enter the value or expression to assign to this variable. Either click numbers on the Math Palette or type them. If the expression includes variables, those variables must be defined at a higher position in the document.
- 6 When you are finished, press the Enter key or click outside the box.

Evaluating expressions

The following are examples of evaluating expressions, using the variable assignments $x = 5$, $y = x + 3$, and $z = x^2$:

$$x + y = 13$$

$$6 \cdot z = 150$$

- 1** To evaluate an expression, click a location in your document to place the expression so that the red plus symbol marks the location.
- 2** Enter the expression by clicking the buttons on the Math Palette. Click the buttons just as you would press buttons on a regular calculator. You can also use the keyboard to type numbers or variable names.
- 3** Click the equal sign (=) in the lower-right corner of the Math Palette (or press the equal sign key on your keyboard) to evaluate an expression. If the expression includes variables, those variables must be defined at a higher position in the document.

Defining functions

The following are examples of defining functions:

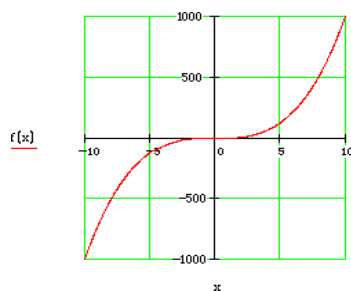
$$f(x) := x^3$$



$$g(y) := y + 5$$

- 1** To create a function, click a location in your document to place the function so that the red plus symbol marks the location.
- 2** Type the name of the function on your keyboard. The name must begin with a letter, but may contain any combination of letters and numbers.
- 3** Press the opening parenthesis key on your keyboard (hold down Shift and press the 9 key).
- 4** Type the name of the variable on which the function will be dependent.
- 5** Press the closing parenthesis key on your keyboard (hold down Shift and press zero).
- 6** Click the assignment button (:=) in the lower-left corner of the Math Palette (or press Shift-colon on your keyboard).
- 7** Enter the expression to define this function by clicking numbers and functions on the Math Palette. Use your keyboard to type variable names. If the expression includes variables, those variables must be defined at a higher position in the document.
- 8** When you are finished, press the Enter key on your keyboard or click outside the box.

Creating graphs

The following is an example of a graph using the function $f(x) = x^3$:





- 1 To create a graph, first define a function as described above.
- 2 Click a location in your document to place the graph so that the red plus symbol marks the location. This location must be in a lower position than the function definition.
- 3 Type the name of the function, including the parenthesis and the dependent variable.
- 4 Click the Graph button  on the Math Palette. The Graphs Palette appears.
- 5 Click the X-Y Plot button  on the Graphs Palette.
- 6 Click outside the box to see the graph.
- 7 To change the range of your graph, click the graph so that the border appears. The numbers on the left and right at the bottom of the graph are the range of the horizontal axis. The numbers on the top and bottom of the left side of the graph are the range of the vertical axis. You can change any of these values by clicking them and typing new numbers.
- 8 Click the Graphs Palette close box when you are finished creating graphs.

Moving items

- 1 To relocate a text box, equation, or graph, click the item you want to move.
- 2 Move the pointer to the border of the box so that it changes to a hand pointer.
- 3 Drag the item to its new location.

Using the Resource Center

The Resource Center gives you additional information about various math resources and also provides in-depth tutorials on all the features of StudyWorks. You can easily add information and graphics from the Resource Center to your documents.

- 1** Click the Resource Center button  on the toolbar at the top of your screen.
- 2** Click one of the following sections:
 - **Quick Tour** – A demonstration summarizing the main features of StudyWorks
 - **Library** – Reference information about all types of mathematics and/or science
 - **Web Link** – Information about the StudyWorks Internet components
 - **How Do I...?** – Step-by-step guides about many StudyWorks features
 - **Tips and Techniques** – Methods to improve your efficiency in all aspects of the program
 - **Crack the SAT II's** – Tips for getting high scores on the SAT II's
 - **Teacher's Resource Guide** – Resources for teachers
 - **Problem Solving** – Techniques for solving advanced math problems
- 3** Click the underlined words and phrases to view subtopics.
- 4** To copy any equation, graph, or picture to your document, first select the item by clicking it. Move the pointer to the border of the box so that the pointer changes to a hand pointer. Then drag the item to a place in your document.
- 5** Click the Backtrack button  to go back to the last page you were viewing.
- 6** Click the Resource Center close box when you're done.