

# Using XYZ Homework

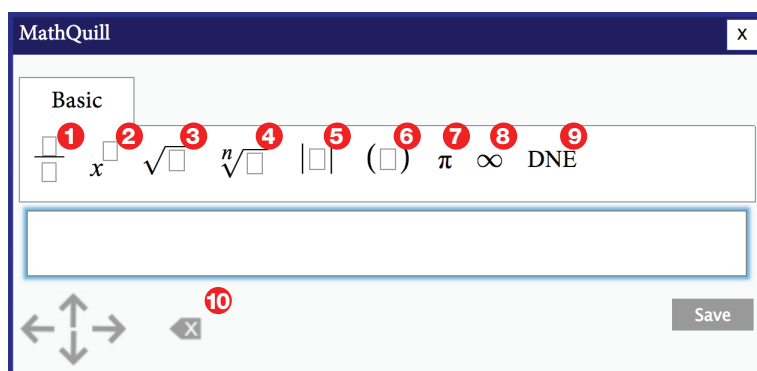
## Entering Answers

When completing assignments in XYZ Homework, it is crucial that you input your answers correctly so that the system can determine their accuracy. There are two ways to enter answers, either by calculator-style math (ASCII math reference on the inside covers), or by using the MathQuill equation editor.



MathQuill allows students to enter answers as correctly displayed mathematics. In general, when you click in the answer box following each question, a yellow box with an arrow will appear on the right side of the box.

Clicking this arrow button will open a pop-up window with the MathQuill tools for inputting normal math symbols.



- |                  |                      |
|------------------|----------------------|
| 1 Fraction       | 6 Parentheses        |
| 2 Exponent       | 7 Pi                 |
| 3 Square Root    | 8 Infinity           |
| 4 $n$ th Root    | 9 Does Not Exist     |
| 5 Absolute Value | 10 Touchscreen Tools |

## Preview Button

Next to the answer box, there will generally be a preview button. By clicking this button, the system will display exactly how it interprets the answer you keyed in. Remember, the preview button is not grading your answer, just indicating if the format is correct.

Rationalize the denominator in the following:

$$\frac{\sqrt{a}-1}{\sqrt{a}+1} = \frac{(a-2\sqrt{a}+1)}{(a-1)}$$

Preview  $\frac{a-2\sqrt{a}+1}{a-1}$  syntax ok

## Tips

Tips will indicate the type of answer the system is expecting. Pay attention to these tips when entering fractions, mixed numbers, and ordered pairs.

**For additional help:** [www.xyzhomework.com/students](http://www.xyzhomework.com/students)

# ASCII Math (Calculator Style) Entry

Some question types require a mathematical expression or equation in the answer box. Because XYZ Homework follows order of operations, the use of proper grouping symbols is necessary.

## Operation Symbols

Meaning	Symbol	Notation	Display
Addition	+	$x+3$	$x + 3$
Subtraction	-	$x-3$ , $-5$	$x - 3$ , $-5$
Multiplication	*	$3*10$ , $3x$	$3*10$ , $3x$
Division	/	$x/3$	$\frac{x}{3}$
Exponents	^	$x^3$	$x^3$

## Relation Symbols

Meaning	Symbol	Notation	Display
Equal to	=	$y=5$	$y = 5$
Not equal to	!=	$y!=-3$	$y \neq -3$
Greater than	>	$x>3$	$x > 3$
Less than	<	$x<4$	$x < 4$
Greater than or equal to	>=	$x>=-3$	$x \geq -3$
Less than or equal to	<=	$y<=-10$	$y \leq -10$

## Grouping Symbols

Meaning	Symbol	Notation	Display
Parentheses	()	$3/(x+5)$	$\frac{3}{x+5}$
Nested parentheses	(( ))	$3/(2(x+5))$	$\frac{3}{2(x+5)}$
Brackets	[]	$[5, 9]$	$[5, 9]$
Braces	{ }	$\{1, 2, 3, 4\}$	$\{1, 2, 3, 4\}$

## Function Symbols

Meaning	Symbol	Notation	Display
Square root	<code>sqrt ()</code>	<code>sqrt (7)</code>	$\sqrt{7}$
<i>n</i> th root	<code>root (n) ()</code>	<code>root (3) (27x)</code>	$\sqrt[3]{27x}$
Absolute value	<code>abs ()</code>	<code>abs (-5)</code>	$ -5 $
Factorial	<code>!</code>	<code>5!</code>	$5!$
Base 10 logarithm	<code>log ()</code>	<code>log (5)</code>	$\log 5$
Natural log	<code>ln ()</code>	<code>ln (x)</code>	$\ln x$
General base a	<code>log_a ()</code>	<code>log_8 (x)</code>	$\log_8 x$

## Miscellaneous Symbols

Meaning	Symbol	Notation	Display
$\pi$	<code>pi</code>	<code>pi r^2</code>	$\pi r^2$
<i>e</i>	<code>e</code>	<code>e^x</code>	$e^x$
Infinity	<code>oo</code>	<code>(-oo, 0)</code>	$(-\infty, 0)$
Does Not Exist	<code>DNE</code>	<code>DNE</code>	$\text{DNE}$

## Advanced Examples

Topic	Example	Display
Enter a reduced fraction	<code>3/5</code>	$\frac{3}{5}$
Enter a mixed number	<code>2_3/5</code>	$2\frac{3}{5}$
Enter a linear equation	<code>y=3x+5</code>	$y = 3x + 5$
Rational expression 1	<code>2/ (3x+5)</code>	$\frac{2}{3x + 5}$
Rational expression 2	<code>2/3x+5</code>	$\frac{2}{3}x + 5$
Rational expression 3	<code>2/ ( (x+5) (x-3) )</code>	$\frac{2}{(x + 5)(x - 3)}$
Exponential expression 1	<code>3^x+2</code>	$3^x + 2$
Exponential expression 2	<code>3^ (x+2)</code>	$3^{x + 2}$