

## Entering Math Expressions in LON-CAPA

In general, you will enter math expressions in LON-CAPA like you would on most calculators. Use / for division, \* for multiplication and ^ for power. Here are some specific rules that I would like to point out.

1. **Always use \* for multiplication to be safe.** When a constant times a variable, \* can be omitted. For example, to express  $2x$ , you can type in either  $2x$  or  $2 * x$ . However, when two variables multiply each other, you must use \* in between them. For example, to express  $xy$ , you have to type in  $x * y$ . Thus, it is a good practice to always use \* for multiplication to be safe.
2. **Use and only use () when needed.** Never use [], <> or {}. For example, to express  $\frac{1}{2(x-1)+y}$ , you should enter  $1/(2(x-1)+y)$ , not  $1/[2(x-1)+y]$ .

Below is a list of examples that you will find very helpful.

What You Want to Express	What You Type in LON-CAPA	Notes
does not exist	DNE	all caps
infinity, $\infty$	INF	all caps
negative infinity, $-\infty$	-INF	all caps
undefined	UNDEFINED	all caps
$\pi$	pi	lower case
$x^y$	$x^{(y)}$	
$e^x$	$e^{(x)}$	
$\sqrt{x}$	$\text{sqrt}(x)$ or $x^{(1/2)}$	
$\sin x$	$\sin(x)$	
$\sin^2 x$	$(\sin(x))^{2}$	
$\log x$	$\log(x)$	
$\ln x$	$\ln(x)$	