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 $^\wedge$ 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, ∞	INF	all caps
negative infinity, $-\infty$	-INF	all caps
undefined	UNDEFINED	all caps
π	pi	lower case
x^y	$x^\wedge(y)$	
e^x	$e^\wedge(x)$	
$\sqrt{x}$	sqrt(x) or $x^\wedge(1/2)$	
$\sin x$	$\sin(x)$	
$\sin^2 x$	$(\sin(x))^\wedge 2$	
$\log x$	$\log(x)$	
$\ln x$	$\ln(x)$	