# WeBWorK Cheatsheet for Students

# WeBWorK Syntax for Operations

Operation	Your Answer	What to type in WeBWorK
Addition	2+7	2 + 7 or 2+7
Subtraction	5-3	5 - 3 or 5-3
Multiplication	4 imes 2	4 * 2 or 4*2
Division	$10 \div 2$	10/2
Exponents	$4^3$	4^3 or 4**3
Fractions	$\frac{3}{7}$	3/7
Square Root	$\sqrt{3}$	sqrt(3) or 3^(1/2)
Absolute Value	x	abs(x) or  x

### Putting it All Together - Entering Expressions

Your Answer	What to type in WeBWorK	Notes
(9+5-6) imes 8	(9+5-6)*8	
(9+5)-(6 imes 8)	(9+5)-(6*8)	
2 imes x	2x or 2 x or 2*x or 2(x)	
$\frac{2}{3x}$	2/(3x)	NOT 2/3x which equals $rac{2}{3}x$
$(3 imes 10)^2$	(3 * 10)^2	NOT 3 * 10^2 which equals $3 imes 10^2$
$5 imes 10^{-45}$	5 x 10^-45	NOT 5 x 10 ^(-45)
$\frac{3+5}{7 imes 12}$	(3+5)/(7*12)	NOT 3+5/7*12 which equals $3+rac{5}{7} imes12$
$\frac{2x}{(5+3)\times 4}$	(2x)/[(5+3)*4]	NOT 2x/5+3*4 which equals $rac{2x}{5}+3 imes 4$ Note the use of square brackets [ ]
${5x-2\over 3+(8+6) imes 7}$	(5x-2)/[3+(8+6)*7]	NOT 5x-2/3+8+6*7 which equals $5x-rac{2}{3}+8+6 imes 7$ Note the use of square brackets [ ]

# Grouping with ()[] and {} to Enter Complex Expressions

#### Use Parentheses: ( ) - Square Brackets: [ ] and Curly Braces: { } to group.

- Example: to enter  $\frac{1+2}{3(4+5)}$  do this in WeBWorK [1+2]/[3(4+5)]
- for  $\frac{4}{2+5}$  don't enter 4/2+5 (which is 7) when you really want 4/(2+5) (which is 4/7).
- Is -5<sup>2</sup> positive or negative? It's negative! This is because the square operation is done before the negative sign is applied. Use (-5)<sup>2</sup> if you want to square negative 5.
- When in doubt use parentheses!!! :-)

### Miscellaneous

Use the "Preview Answer" button to see exactly how your entry looks.

• Example: to tell the difference between 1+2/3\*4 and [1+2]/[3\*4] click the "Preview Answer"\*\* button.

#### Only enter what the question asks for!

• Example: If the question says solve for x and x = 5 is the solution, only enter 5, do not enter x = 5.

#### WeBWorK is case sensitive!

• Example: if the answer is x = 5, do not enter X = 5. x and X are different!

### WeBWorK Specific Order of Operations

Operator	Description	Order	Examples
( ), [ ], { }	Grouping	1st	
^ or **	Exponentiation	2nd	WeBWorK <b>exponents</b> are taken <i>right to left</i> so $2^3^4 = 2^{(3^4)} = 2^{81} = a$ big number. <b>Note:</b> this may not be the same as your calculator!
-	negation (indicates that a value is negative)	3rd	
* and /	Multiplication and Division	4th	Multiplications and divisions are performed <i>left to right</i> 2/3*4 = (2/3)*4 = 8/3.
+ and -	Addition and Subtraction	5th	Additions and subtractions are performed <i>left to right</i> 1-2+3 = (1-2)+3 = 2