

Right hand side vs. Left hand side

What: Different sides to an operator e.g. ==

Why: Proper treatment of the sides of an operator e.g. == results in much functionality

Time To Complete: 3 hours



.left and .right

In Free Form Programming Language (ff) the dot operator, namely the dot on your keyboard, allows for accessing **parts** of an expression!

For a given equation e.g. eq, in the ff program below, the lhs or x^2-1+y can be accessed by the expression `eq.left` and $a/b+c$ by the expression `eq.right`.

```
eq = (x^2-1+y == a/b+c);  
  
lhs = eq.left;  
  
show lhs;  
  
rhs = eq.right;  
  
show rhs;  
  
save as sides;
```

Output

```
"lhs" → -1 + x2 + y  
"rhs" → a/b + c
```

The programmer is not required to use a symbol e.g. eq for this . access, as long as using the () operator the results would be the same:

```
tmp = (x^2-1+y == a/b+c).left;  
  
show tmp;  
  
save as lhsrhs;
```

Output

```
"tmp" → -1 + x^2 + y
```

?

In Free Form Programming Language (ff), the Symbol \oplus is one of several unassigned operators.

“ As you can see the . operator works perfectly even if the operator in use is not defined! This is a core language aspect of ff that allows undefined variables as well as undefined functions and undefined operators alike.

```
eq = (x^2-1+y)  $\oplus$  (a/b+c);  
  
lhs = eq.left;  
  
show lhs;  
  
rhs = eq.right;  
  
show rhs;  
  
save as sides;
```

Output

"lhs" → $-1 + x^2 + y$

"rhs" → $a/b + c$

Try different operators.

```
eq = (x^2-1+y) <= (a/b+c);
```

```
lhs = eq.left;
```

```
show lhs;
```

```
rhs = eq.right;
```

```
show rhs;
```

```
save as sides;
```

Output

"lhs" → $-1 + x^2 + y$

"rhs" → $a/b + c$

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