Using increment/decrement postfix/prefix

This is another one of those weird things that doesn’t behave as you would expect.

$x = 5;

echo $x;

echo $x+++$x++;

echo $x;

echo $x---$x--;

echo $x;

What’s the output of this?

Surprisingly (with the addition of commas and spaces between the echo statements), it’s 5, 11, 7, 1, 5.

First of all for clarity $x+++$x++ is equivalent to $x++ + $x++. But still I thought that would come to 13, or possibly 12, but 11 was a surprise. The reason is that with the increment done ‘postfix’ i.e. $x++, rather than the alternative ‘prefix’, ++$x, the value used is the value *before* the increment. That is, $x++ means, ‘use $x, then increment it’.

So I still don’t quite get this but I think the way $x+++$x++ goes is:

1. take the value of $x on the left hand side of the addition operation (5) and use that as the first operand
2. increment $x (6)
3. use the new ‘current’ value of $x (6) on the right hand side as the second operand
4. perform the addition of these operands (5 + 6)
5. increment the current value of $x (7)

On the other hand, using prefix ++$x + ++$x, does exactly what you would expect, 6 + 7 = 13 (NB you can’t push this together as ++$x+++$x. That produces a parse error).

NB this is not a PHP specific issue but something common to C and other related languages.