Perl Weekly Challenge - 023, Task #1 • Mark Senn

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> Suppose we have list (X) of numbers: 5, 9, 2, 8, 1, 6 and we would like to create 1st order forward difference series (Y). So using the formula Y(i) = X(i+1) - X(i), we get the following numbers: (9-5), (2-9), (8-2), (1-8), (6-1). In short, the final series would be: 4, -7, 6, -7, 5. If you noticed, it has one less number than the original series. Similary you can carry on 2nd order forward difference series like: (-7-4), (6+7), (-7-6), (5+7) =¿ -11, 13, -13, 12.

Perl 6 solution

```
#
# Perl Weekly Challenge - 023
# Task #1
#
# See
#     engineering.purdue.edu/~mark/blog/pwc-023-1.pdf
# for more information.
#

# Run using Perl v6.d.
use v6.d;

# Get command line arguments.
my $order = shift @*ARGS;
my @x = @*ARGS;

my $i = 1;
while  @x.elems > 1 && $i <= $order  {
    @x = @x[1..*] <<->> @x[0..^*-1];
    say "order {$i++}: {@x}";
}
```

History

2019-09-01 Finished first version.