Dot Product • Mark Senn • last updated on 2021-12-28 at 12:05-05

Problem Statement

From The Weekly Challenge - 145 Task #1: Dot Product retrieved on 2021-12-28 at 12:07-05:34-05:

> **Submitted by:** Mohammad S Anwar
>
> You are given two arrays of same size, @a and @b.
>
> Write a script to implement Dot Product.
>
> **Example:**
> ```
> @a = (1, 2, 3);
> @b = (4, 5, 6);
>
> $dot_product = (1 * 4) + (2 * 5) + (3 * 6) => 4 + 10 + 18 => 32
> ```

Raku Solution

I like Raku much better than Perl. One reason: more expressive programming operators.

```
my @a = (1, 2, 3);
my @b = (4, 5, 6);

# Compute dot product of @a and @b and print it.
# "@a <<*>> @b" does pair-wise multiplication of elements in @a and @b.
# For example, "[+] (4, 10, 18)" does 4 + 10 + 18.
say [+] (@a <<*>> @b);
```

Wolfram Language Solution

```
a = {1, 2, 3};
b = {4, 5, 6};

# Compute dot product of @a and @b and print it.
Print[a . b];
```