

Program_02_5

Requirements

- Complete exercise **2.4 on page 51 (7th edition)**
- Complete **Instructor Problem 2.1 below**.
- Include comments and create output with the format shown below.

Instructor Problem 2.1

1. Define vector A with elements of 12, 24, 36, 48
2. Define vector B with elements of 6, 4, 2, 1
3. Compute A+B, A-B, A*B, A/B, AB using element-wise operations for each.

Tip: To output rational numbers (fractions) include the command: **format rat**. But, don't forget to restore the output to the default format by including the command: **format**

Program

In the code block below, create your program, editing the existing text as necessary.

Note: If you are using Octave then you will need to create a separate script file, save that separate file as the name **Program_02_05**. It will not conflict with this file of the same name since the extension will be different.

```
% Filename:
% Author:
% Assisted by:
% Date:

% Program Description:

% Clear the command window and all variables

% Output of the title and author to the command window.

% Main program
```

```
Output for Program_02_5 written by Geoff Berl.
Output for Exercise 2.4 on page 53 using format rat
n =
     1         2         3         4         5
PartA =
     2         4         6         8        10
PartB =
    1/2         1    3/2         2    5/2
PartC =
     1    1/2    1/3    1/4    1/5
PartD =
     1    1/4    1/9    1/16    1/25
```

Output for Instructor Problem 2.1 using the default format

```
A = 1x4
  12    24    36    48
B = 1x4
   6     4     2     1
APlusB = 1x4
  18    28    38    49
AMinusB = 1x4
   6    20    34    47
ATimesB = 1x4
  72    96    72    48
ADividedByB = 1x4
   2     6    18    48
ARaisedToB = 1x4
2985984    331776    1296    48
```

Output

Output for Program_02_5 written by Geoff Berl.

Output for Exercise 2.4 on page 51 using format rat

n =

1 2 3 4 5

PartA =

2 4 6 8 10

PartB =

1/2 1 3/2 2 5/2

PartC =

1 1/2 1/3 1/4 1/5

PartD =

1 1/4 1/9 1/16 1/25

Output for Instructor Problem 2.1 using the default format

A =

12 24 36 48

B =

6 4 2 1

APlusB =

18 28 38 49

AMinusB =

6 20 34 47

ATimesB =

72 96 72 48

ADividedByB =

2 6 18 48

ARaisedToB =

2985984 331776 1296 48