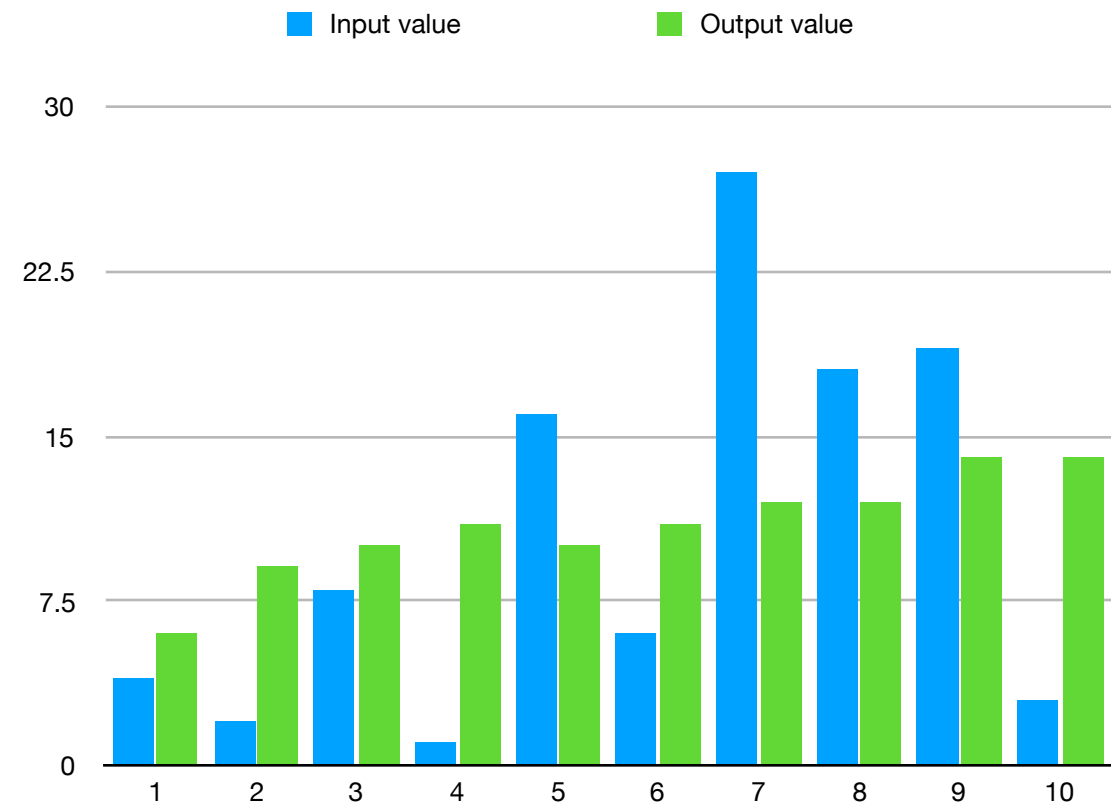The Bro-grammers
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Signal

N	Input value	Output value
1	4	6
2	2	9
3	8	10
4	1	11
5	16	10
6	6	11
7	27	12
8	18	12
9	19	14
10	3	14

Input: 0748:0070 to 0748:0079

```
0748:0070   04 02 0B 01 10 06 1B 12-13 03 0D 0A 24 00 00 00
0748:0080   00 00 00 00 00 00 00 00 0A-00 8B 34 8E 06 E6 05 80
```

Output: 0748:007D to 0748:0086

```
0748:0070                              -              06 09 0A
0748:0080   0B 0A 0B 0C 0C 0E 0E 0A-05 8B 34 8E 06 E6 05 80
```

Memory size is 1MB or 1024KB
Remove CS and SS total of 128KB
Remaining will be 896KB
Since we need to store both the input and output signal we will need half of the remaining for the input as maximum.
Maximum number of data points:448KB

```
start

Move Input Array into
Accumlator

Move Accumlator into
DataSegment

Clear Destination
index

Clear Counter CL<--
0

Move Length of
input array into CH

Move length of
input into
Accumlator(AL)

Subtract CL From
AL

DEC AL

Move CL into AH
```

```
Compare AH < 5  --NO-->  Move5 into AL

Compare AH < 4  --NO-->  Mov 4 into AH

Clear DI

Move DI into BX

Subtract AH From
BL

Add DH,AL

ADD DH,AL

ADD DH AH
```

```
INC DH

Move DH into
Memory of Count

Move BX into SI

Add DL,and content
of
array with offset of SI

INC BX

DEC DH

IF DH =0  --NO-->

yes

Push Ax

Push BX

Clear AX
```

```
Clear BX

Mov AL,DL

Mov Bl, Count

Divide Al by Bl

mov Al to address of
result with offset of DI

Pop BX

Pop AX

INC DI

INC CL

DEC CH

DEC CH  --If CH =0-->  yes --> Terminate
                          No
```