

Simple Math – (Packed Arithmetic)

100 Points

Data Formats: In: CSU.PUBLIC.DATA(DATAPRG&PROG)

CC 1 - 2 Variable A (Input and Output)

CC 6 - 7 Variable B (Input and Output)

CC 11 - 11 Variable C (Output Only)

CC 16 - 17 Variable S (Output Only)

Assume that two fields A and B are given. (**May not be digits!**)

Validate that A is a positive 2-digit integer **less than** 94, and that B is **not greater than** A. (OK for B to equal A!) If A or B is invalid, output A and B without calculating S or C!

Create S by adding 4 to B and if S is an Odd Integer, ADD 1 to it. (Making it Even!) Then subtract S from A giving N.

Convert N to a letter in the variable C using the following rules:

If $N < 1$, then $C = 'T'$

If $N = 1$ thru 4, then $C = 'A'$ thru $'D'$

If $N > 4$, then $C = 'X'$

Name your program: PROG2 and leave it in your Library. Break the program logic into **subroutines about a screen each** and use the BAS instruction to call them! No 'SPAGHETTI CODE!!'

Use: CSU.PUBLIC.DATA(DATAPRG&PROG) as the input dataset. It's OK to leave 'debug' items in the print line!

Example: Enter A = 18, B = 12

Output: 18 12 B 16

Example: Enter A = 21, B = 15

Output: 21 15 A 20
