IDENTIFICATION: MATRIX MULTIPLIER

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PURPOSE: This program will compute the product of N number of square matrices up to and including an 8 x 8 matrix. For a matrix greater than a 6 x 6, the output will be by columns.

OPERATING INSTRUCTIONS:

This program is compatable with Cinch II or III. Perform the following steps in the order given:

1. Data is entered via paper tape and is punched by rows. A "D" must precede, and an "E" must end, each row of data points.

2. Set tab stops at 13, 23, 32, 41, 50.

3. Load PB -2003B by typing "R".

4. Insert data tape in tape reader and type $0001 C/R G.

5. Type D N C/R E. Where N = size of matrix. N must equal the highest array being used. Example;
Find the product of

$$[3 \times 6]\ [6 \times 3] \quad N = 6$$
$$[5 \times 3]\ [3 \times 3] \quad N = 5$$

To compute the product of 3 or more matrices, follow the above steps and proceed as follows:

6. Depress the enable and break point switches, type I and raise the enable and break point switches.

7. Enter data tape for third matrix in the tape reader and type $0197 C/R G.

To compute the product of $[A][B][A]^T$ follow steps 1 thru 5 and proceed as follows:

8. Upon completion of step #5 the computer will halt displaying a line number of 04 (normal halt) at this point depress the enable and break point switches, type I, raise the enable and break point switches, and type $0305 C/R G. This will start the program and upon completion print the product of $[A][B][A]^T$.