

Lab Goal : The lab was designed to help you review classes, objects, files, arrays, and matrices.

Lab Description : Write a program to make a magic square of numbers. A *magic square* is matrix of numbers. Every column, every row, and every diagonal add up to the same value. Read in matrix values and determine if the sum of all rows, columns, and diagonals is the same. If all have the same sum, print out that the matrix is a magic square. Otherwise, print that the matrix is not a magic square.

Sample Input :

```
6
3
8 1 6 3 5 7 4 9 2
3
6 1 8 7 5 3 2 9 4
3
8 3 1 3 5 7 9 4 2
4
7 12 1 14 2 13 8 11 16 3 10 5 9 6 15 4
5
17 24 1 8 15 23 5 7 14 16 4 6 13 20 22 10 12 19 21 3 11 18 25 2 9
5
17 24 1 8 5 23 5 7 14 6 4 6 13 20 2 10 12 19 21 3 11 18 25 2 9
```

Files Needed ::

```
MagicSquare1.java
MagicSquare1Runner.java
magic1.dat
```

Sample Output :

```
8 1 6
3 5 7
4 9 2
MAGIC SQUARE

6 1 8
7 5 3
2 9 4
MAGIC SQUARE

8 3 1
3 5 7
9 4 2
NOT A MAGIC SQUARE

7 12 1 14
2 13 8 11
16 3 10 5
9 6 15 4
MAGIC SQUARE

17 24 1 8 15
23 5 7 14 16
4 6 13 20 22
10 12 19 21 3
11 18 25 2 9
MAGIC SQUARE

17 24 1 8 5
23 5 7 14 6
4 6 13 20 2
10 12 19 21 3
11 18 25 2 9
NOT A MAGIC SQUARE
```

15	15	15	15
8	1	6	15
3	5	7	15
4	9	2	15