**procedure** Initialisation

**for** i := 1 **to** SIZE **do**

**for** j := 1 **to** SIZE **do**

set all 'slots' in table to be 0

set all sum to be 0

**procedure** Input\_Parameter

prompt input

check +ve and odd

**procedure** Construct\_Magic\_Square

set **row** := 1

set **column** := (n + 1) div 2

set **value** := 0

**repeat**

**value** := **value** + 1;

**magic[row, column]** := value

**row** := **row** - 1

**column** := **column** - 1

**if** in zone 3

**row** := n

**else if** in zone 2

**column** := n

**else if** in zone 1

**row** := 2

**column** := 1

**if** in zone 4

**row** := **row** + 2

**column** := **column** + 1

**until** value > sqr(n)

**procedure** Construct\_Magic\_Square

**for** **row** := 1 **to** n **do**

**for** **column** := 1 **to** n **do**

**row\_sum[row]** := **row\_sum[row]** + **magic[row,column]**;

**for** **column** := 1 **to** n **do**

**for** **row** := 1 **to** n **do**

**col\_sum[column]** := **col\_sum[column]** + **magic[row,column]**;

**for** **row** := 1 **to** n **do**

**diag\_sum[1]** := **diag\_sum[1]** + **magic[row, column - 1]**;

**for** **column** := 1 **to** n **do**

**diag\_sum[2]** := **diag\_sum[2]** + **magic[row - 1, column]**;

**procedure** Display\_Magic\_Square

Display a **n** set of horizontal line above the table

write diag\_sum[2]

**for** row := 1 **to** n **do**

**for** column := 1 **to** n **do**

write(**magic[i,j]**)

writeln(**col\_sum[n]**)

Display a **n** set of horizontal line below the table

write(diag\_sum[1])

**for** column := 1 **to** n **do**

write(row\_sum[x])

readln(option)

**repeat**

call Initialisation

call Input\_Parameter

call Construct\_Magic\_Square

call Find\_All\_Sum

call Display\_Magic\_Square

**until** option **in** ['N', 'n'];