

Dem:

The line drawing code for each individual some is not optimized, since, we need to write a lot of redundant lines of code.

livision

Hence, we use 8-way symmetry.

Explanation of the corresponding coordinates in the offer somes by using reflection in the lines (y=x) & (y=x)

from the above figure it can be determined that any point in another some can be traced back to some 0 (7,4) pattern, by going through the corresponding rearrangement of me x & y coordinates in the other stones.

1000 2190 60(KG So, if we can derive me mid point line drawing algorithm for zone or we can use it draw a line in any other zone, Just by rearrangement of me coordinates in any other zone as shown in figure above. So we transform the points to zone or find the rest pixel and by rearrangement, draw the pixel in its actual zone.

Conve	rting from any other zone	to zone 0:
1	For X current value of	me coordinate In their For Y
Zone O	New x = 2 x	to their for y respective
Zonel	New x = y	New y = x
Zone 2	New z = y	New y = -x
Zone 3	New x = / -x	New y = y
Zone 4	New x = -x	New y = -y
Zone 5	New z = 1,7-4	New y = -x
Zone 6	New 2 = 1 - 4	New y = x
Zone 7	New x = / x	New y = -y
	if there is a minus sign, it needs	The conversion
- Conver	current coordinate	other tone: 2000 2 &
Conver	current coordinate	except too
Conver	to multiplied to mo correct coordinate	6ther Fore: 2000 2
,	everent coordinate thing from zone o to any for x	ofther tone: For y Similar except for 2 one 2 & 2 one 6
20na 0	to multiplied to mo everent coordinate whing from Zone o to any For X New X = X	Similar except for 2000 2 2 For y 2000 6 New y = y
Zone o	to multiplied to mo correct coordinate correct coordinate whing from Zone o to any For X New x = x New x = y	Similar except for 2 mo 2 & 2 mo 2 & 2 mo 2 & 2 mo 6 New y = y New y = x
Zone 0 Zone 1 Zone 2 Zone 3 Zone 4	to multiplied to more correct coordinate everent coordinate ting from Zone of to any	Similar except for 2000 2 2 For y 2000 2 2 New y = x New y = x
20ne 0 20ne 1 70ne 2 20ne 3	to multiplied to more everent coordinate everent coordinate thing from 2000 0 to any $ \frac{\text{for } x}{\text{New } x} = x $ New $x = y$ New $x = -y$ New $x = -x$	Similar except for 2 me 2 Q For y 2 one 6 New y = x New y = x New y = x New y = y
Zone 0 Zone 1 Zone 2 Zone 3 Zone 4	to multiplied to mo everent coordinate thing from Zone of to any For X New $x = -x$ New $x = -y$ New $x = -x$ New $x = -x$	Similar except for $\frac{1}{2}$ and $\frac{1}{2}$ \frac
20ne 0 20ne 1 20ne 2 20ne 3 20ne 4 20ne 5	to multiplied to mo everent coordinate thing from 2000 0 to any For X New $x = x$ New $x = y$ New $x = -y$ New $x = -x$ New $x = -x$ New $x = -x$ New $x = -x$	Similar except for $\frac{1}{2}$ and $\frac{1}{2}$ \frac