

Midpoint Circle Drawing Algorithm :

Step 1: Start .

Step 2: Input the radius r of the circle and the center coordinates (x_c, y_c) .

Step 3: Initialize $x = 0$ and $y = r$.

Step 4: Initialize the decision parameter $p = 1 - r$.

Step 5: Plot the initial point (x, y) and its 8 symmetric points using circle symmetry.

Step 6: Repeat the following steps while $x < y$:

Step 7: Increment x by 1.

Step 8: If the decision parameter $p < 0$, then update $p = p + 2x + 1$.

Step 9: Else, decrement y by 1 and update $p = p + 2(x - y) + 1$.

Step 10: Plot the new point (x, y) and its 8 symmetric points.

Step 11: Continue the process until $x \geq y$.

Step 12: Stop.