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1 import matplotlib.pyplot as plt

1 def draw_line_midpoint(x1, y1, x2, y2):
2     points = []
3
4     dx = x2 - x1
5     dy = y2 - y1
6
7     x, y = x1, y1
8     points.append((x, y))
9
10    d = dy - (dx / 2)
11
12    while x < x2:
13        x += 1
14        if d < 0:
15            d = d + dy
16        else:
17            y += 1
18            d = d + dy - dx
19        points.append((x, y))
20
21    return points

1 def plot_line(points, title):
2     x_values, y_values = zip(*points)
3     plt.plot(x_values, y_values, marker='o')
4     plt.title(title)
5     plt.xlabel('X-axis')
6     plt.ylabel('Y-axis')
7     plt.grid(True)
8     plt.show()
9

1 # Example usage:
2 x1, y1 = 2, 3
3 x2, y2 = 9, 8

1 # Midpoint algorithm
2 midpoint_points = draw_line_midpoint(x1, y1, x2, y2)
3 plot_line(midpoint_points, 'Midpoint Line Drawing')

```


