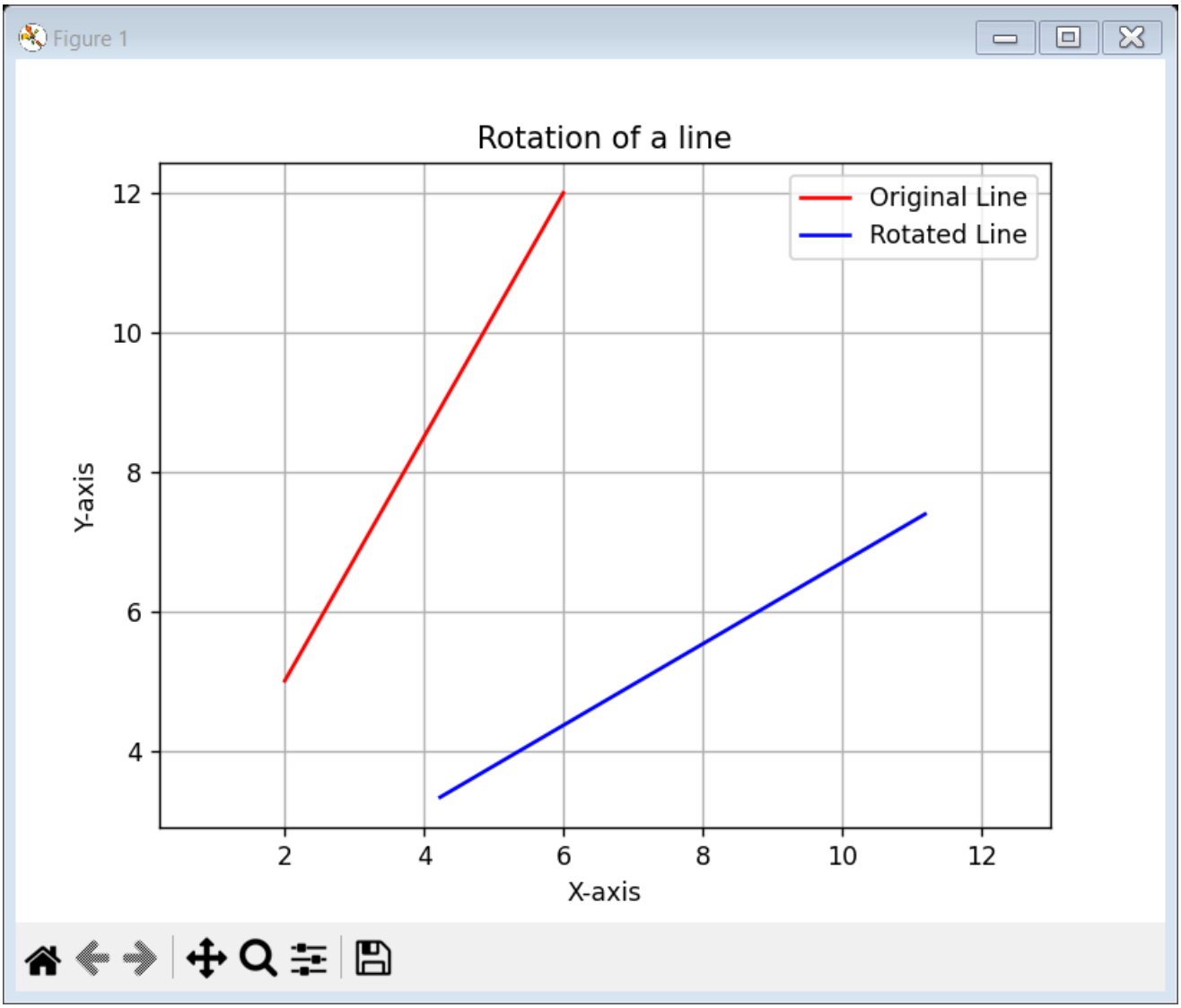
Calculation:

```
C:\practicals 3rd sem\Computer graphics>python subash.py

1. Translation
2. Rotation
3. Scaling
4. Exit
Enter your choice (1-4): 2
Enter the coordinates of the starting point of the line: 2 5
Enter the coordinates of the ending point of the line: 6 12
Enter the rotation angle in degrees: 30
Point before rotation:
[2, 5]
[6, 12]

Point after rotation:
[4.23, 3.33]
[11.20, 7.39]
```

Output:



Calculation table:

```
C:\practicals 3rd sem\Computer graphics>python subash.py
Enter the center co-ordinate: 0 0
Enter the x and y-radius of ellipse: 8 6
For region 1
Iteration       p       (xk+1,yk+1)     2ry^2(xk+1)     2rx^2(yk+1)     (x,y)   (-x,y)   (-x,-y)   (x,-y)
2               -296.0  (1,6.0)         0.0             768.0           (1,6.0) (-1,6.0) (-1,-6.0) (1,-6.0)
3               -188.0  (2,6.0)         72.0            768.0           (2,6.0) (-2,6.0) (-2,-6.0) (2,-6.0)
4               -8.0    (3,6.0)         144.0           768.0           (3,6.0) (-3,6.0) (-3,-6.0) (3,-6.0)
5               244.0   (4,6.0)         216.0           768.0           (4,6.0) (-4,6.0) (-4,-6.0) (4,-6.0)
6               -200.0  (5,5.0)         288.0           768.0           (5,5.0) (-5,5.0) (-5,-5.0) (5,-5.0)
7               196.0   (6,5.0)         360.0           640.0           (6,5.0) (-6,5.0) (-6,-5.0) (6,-5.0)
8               24.0    (7,4.0)         432.0           640.0           (7,4.0) (-7,4.0) (-7,-4.0) (7,-4.0)
9               52.0    (8,3.0)         504.0           512.0           (8,3.0) (-8,3.0) (-8,-3.0) (8,-3.0)
For Region 2
Iteration       p       (xk+1,yk+1)     2ry^2(xk+1)     2rx^2(yk+1)     (x,y)   (-x,y)   (-x,-y)   (x,-y)
1               233.0   (8,2.0)         576.0           384.0           (8.0,2.0)       (-8.0,2.0) (-8.0,-2.0) (8.0,-2.0)
2               41.0    (8,1.0)         576.0           256.0           (8.0,1.0)       (-8.0,1.0) (-8.0,-1.0) (8.0,-1.0)
3               -23.0   (8,0.0)         576.0           128.0           (8.0,0.0)       (-8.0,0.0) (-8.0,0.0) (8.0,0.0)
```

Output: