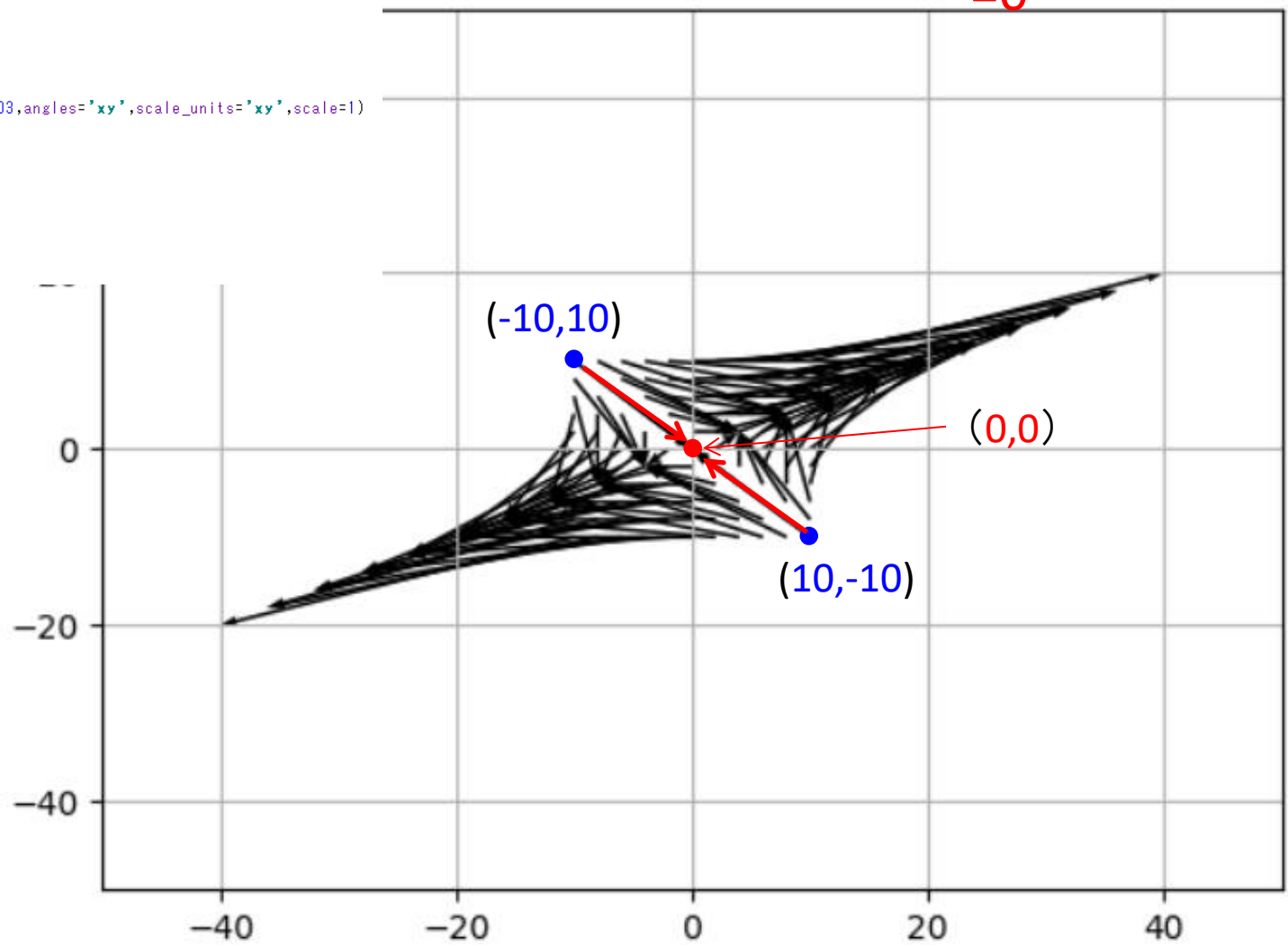


```
1 import numpy as np
2 import matplotlib.pyplot as plt
3
4 plt.figure()
5 a = 2
6 b = 2
7 c = 1
8 d = 1
9
10 for i in range(-10,11,2):
11     for j in range(-10,11,2):
12         x = i
13         y = j
14         u = a*x+b*y-x
15         v = c*x+d*y-y
16         print(x,y,u+x,v+y)
17         plt.quiver(x,y,u,v,width=0.003,angles='xy',scale_units='xy',scale=1)
18
19
20 plt.xlim([-50,50])
21 plt.ylim([-50,50])
22 plt.grid()
23 plt.draw()
24 plt.show()
```

$$A = \begin{pmatrix} a & b \\ c & d \end{pmatrix} = \begin{pmatrix} 2 & 2 \\ 1 & 1 \end{pmatrix}$$

$$A^{-1} = \begin{pmatrix} a & b \\ c & d \end{pmatrix}^{-1} = \frac{1}{ad-bc} \begin{pmatrix} d & -b \\ -c & a \end{pmatrix} = \frac{1}{\boxed{2 \times 1 - 2 \times 1}} \begin{pmatrix} 1 & -2 \\ -1 & 2 \end{pmatrix}$$

$= 0$



行列Aを掛けると
(-10,10)も(10, -10)
何れも(0,0)に変換

逆行列A⁻¹で戻す際
にどちらに戻るか
不明