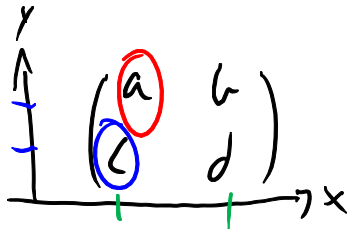
2.



$M[1,1] = a$

$M[2,1] = b$

a, b, c, d

$$\begin{vmatrix} \lambda - a_{11} & -a_{12} \\ -a_{21} & \lambda - a_{22} \end{vmatrix} = (\lambda - a_{11})(\lambda - a_{22}) - (-a_{12} \cdot -a_{21})$$

$(\lambda - a11)(\lambda - a22) - 1$ $\quad \lambda^2 \quad -\lambda a22 - a11\lambda \quad -a11 \cdot -a22 - a12 \cdot a21$

$a11 \cdot a22 - a11\lambda - a12 \cdot a21 - a22\lambda + \lambda^2$

$(\lambda^2)(a11\lambda - a22\lambda) + (a11 \cdot a22 - a12 \cdot a21)$

$a11\,x + a12\,y = \lambda x$

$a21\,x + a22\,y = \lambda y$

$\frac{x(\lambda - a)}{b} = y$

$\frac{-ax}{b - \lambda} = y$

$ax^2 + bx + c$

$x^2 + y^2 = 4$

$x^2 + y^2 = 1$

$x^2 = 4 - y^2$

$x = \sqrt{4 - y}$