

$$\mathbf{m} = \frac{1}{6} \sum_{k=1}^6 \mathbf{x}_k = (6, 6)^t \quad (1)$$

$$\Sigma = \frac{1}{6} \sum_{k=1}^6 (\mathbf{x}_k - \mathbf{m})(\mathbf{x}_k - \mathbf{m})^t = \begin{pmatrix} 13.67 & 6.33 \\ 6.33 & 8.33 \end{pmatrix} \quad (2)$$

$$\Sigma \mathbf{w} = \lambda \mathbf{w} \quad (3)$$

$$\lambda_1 = 17.87, \quad \lambda_2 = 4.13 \quad (4)$$

$$\mathbf{w}_1 = (0.833, 0.553)^t, \quad \mathbf{w}_2 = (-0.553, 0.833)^t \quad (5)$$

$$\mathbf{w} = \mathbf{w}_1 = (0.833, 0.553)^t \quad (6)$$

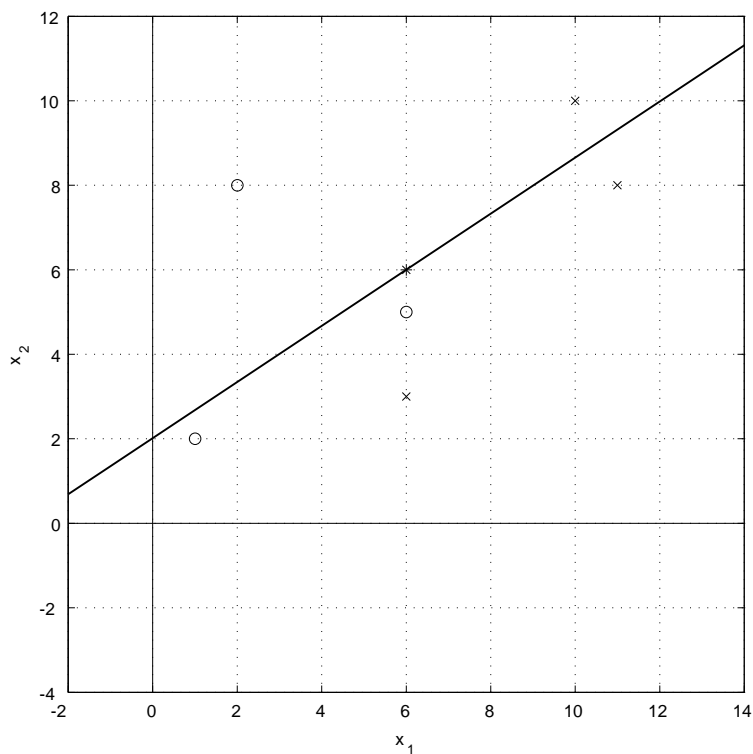


図 1: KL 展開