1. 아래와 동일한 contents가 나타나도록 문서를 구성하시오.

Contents

2. 다음을 입력하시오.

(a)

$$\lim_{n\to\infty} \sum_{k=1}^{n} \frac{1}{k^2} = \frac{\pi^2}{6}$$

(b)

$$\sin\ x = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \cdots$$

(c)

$$\operatorname{corr}(X, Y) = \frac{\sum_{i=1}^{n}(x_i - \overline{x})(y_i - \overline{y})}{\left[\sum_{i=1}^{n}(x_i - \overline{x})^2 \sum_{i=1}^{n}(y_i - \overline{y})^2\right]^{1/2}}$$

(d)

$$\left(\begin{array}{c|c|c} 1 & 2 & 3 \\ \hline 4 & 5 & 6 \end{array}\right)$$

(e)

$$\mathbf{X} = \begin{pmatrix} x_{11} & x_{12} & \dots \\ x_{21} & x_{22} & \dots \\ \vdots & \vdots & \ddots \end{pmatrix}$$

(f)

$$y = \begin{cases} a, & \text{if } d > c \\ b + x, & \text{in the morning} \\ l, & \text{all the long} \end{cases}$$

(g)

$$f(x;\ \alpha,\ \beta) = \begin{cases} \alpha\beta x^{\beta-1} e^{-\alpha x^{\beta}}, & x > 0 \\ 0, & \text{otherwise} \end{cases}$$