

$$y = mx + c \tag{1}$$

The equation (??) is for a straight line.

$$\text{text} \quad x = x^{\text{low}} + yd \text{ .}$$

$$y = mx^2 + \sqrt{x} \tag{2}$$

$$y = \sum_0^N n^2 \tag{3}$$

$$y = \sum_0 x_n^2 \tag{4}$$

$$y = \int x dx \tag{5}$$

$$y = \int_0^\infty x dx \tag{6}$$

$$y = \int_{-\infty}^\infty (x^2 + 2) dx \tag{7}$$

$$y = \frac{x-a}{x-b} \tag{8}$$

$$a < b < c \tag{9}$$

$$a \leq b \geq c \tag{10}$$

$$f_x(x)=\left\{\begin{array}{ll}0,&\text{if }x<0\\ \frac{x-a}{a-b},&\text{if }a\leq x<b\\ 1,&\text{if }x\geq b\end{array}\right.$$
(11)

$$\dot{x}, \ddot{x}, \ddot{\ddot{x}}, \ddot{\ddot{\ddot{x}}}$$
(12)

$$\frac{\partial y}{\partial x}$$
(13)

$$\frac{dx}{dt}=\frac{d}{dt}(x^2+2x+1)$$
(14)

$$\geq$$
(15)

$$\ni$$
(16)

$$\propto$$
(17)

$$\gg$$
(18)

$$x^2+y^2=r^2$$

Left aligning the equation

$$x^2+y^2=r^2$$
(19)

$$x^2+y^2=r^2$$
(20)

$$x^2+y^2=r^2$$

$$x^2+y^2=r^2$$

$$\begin{array}{ll}
\text{Minimize} & f(\boldsymbol{x}) \\
\text{Subject to} & g_i(\boldsymbol{x}) \leq 0; \quad i = 1, \dots, m \\
& h_k(\boldsymbol{x}) = 0; \quad k = 1, \dots, p \\
& x_j \geq 0; \quad j = 1, \dots, n
\end{array}$$

$$\begin{aligned}
& 5x_1 + 2x_2 + 3x_3 - \\
& \quad x_4 - 4x_5 + 5x_6 + \\
& \quad 7x_7 + 3x_8 - 6x_9 - \\
& \quad \quad \quad 2x_{10} - 5x_{11} = 7634 \quad (21)
\end{aligned}$$

$$\begin{aligned}
f(x) &= x^3 + 2x^2 - 5x + 10 \\
&= (2)^3 + 2(2)^2 - 5(2) + 10 \\
&= 16
\end{aligned} \tag{22}$$

$$S = \frac{n}{2}(2a + \overline{n-1}d) \tag{23}$$

$$\begin{aligned}
f(x,y) = h \bigg[& \frac{1}{2}(x+y) + x^2 + y^3 \\
& + \frac{1}{3}z^2 \bigg]
\end{aligned} \tag{24}$$