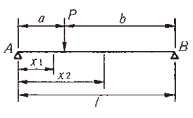
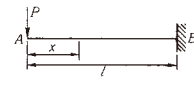
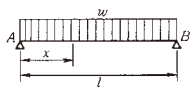
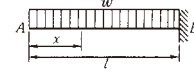
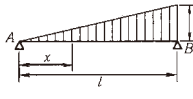
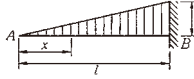
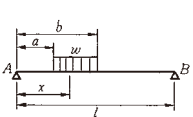
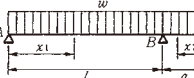
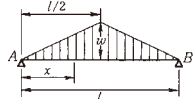

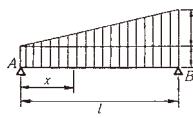
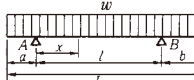


梁の公式(1/2)

	<p>(1)</p> $R_A = \frac{Pb}{l}, R_B = \frac{Pa}{l}$ $Mx_1 = R_A x_1, \max M = \frac{Pl}{4} \quad (Pが中央に載る時)$ $Mx_2 = R_A x_2 - P(x_2 - a)$ $\max M_m = \frac{Pab}{l}, \max \delta = \frac{Pa^2 b^2}{3EI}$		<p>(7)</p> $R_A = 0 \quad R_B = P$ $Sx = -Px \quad Mx = -Px^2$ $\max M_B = -Pl \quad \max \delta = \frac{Pl^3}{3EI}$
	<p>(2)</p> $R_A = R_B = \frac{wl}{2}, Sx = \frac{wl}{2} - wx$ $Mx = R_A x - \frac{wx^2}{2} = \frac{wx}{2}(l-x)$ $\max M = \frac{wl^2}{8} = 0.125wl^2$ $\max \delta = \frac{5wl^4}{384EI}$		<p>(8)</p> <p>全長に等布荷重wが作用する場合</p> $R_A = 0 \quad R_B = wl$ $Sx = -wx \quad Mx = -\frac{wx^2}{2}$ $\max M_B = -\frac{wl^2}{2} \quad \max \delta = -\frac{wl^4}{8EI}$
	<p>(3)</p> $R_A = \frac{1}{6}wl, R_B = \frac{1}{3}wl$ $Sx = \frac{w}{6l}(l^2 - 3x^2)$ $Mx = \frac{wx}{6l}(l^2 - x^2)$ $\max M = 0.0642wl^2 \quad x = 0.5774l$ $\max \delta = 0.00652 \frac{wl^4}{EI}$		<p>(9)</p> $R_B = \frac{wl}{2} \quad Sx = -\frac{wx^2}{2l}$ $Mx = -\frac{wx^3}{6l} \quad \max M_B = -\frac{wl^3}{6}$ $\max \delta = \frac{wl^4}{30EI}$
	<p>(4)</p> $R_A = \frac{w}{2l}(b-a)(2l-b-a)$ $R_B = \frac{w}{2l}(b-a)(b+a)$ $Mx = R_A x - \frac{w}{2}(x-a)^2$ $x_0 = a + R_A/w$ $\max M = R_A x_0 - \frac{w}{2}(x_0 - a)^2$ <p>桁の中央に荷重が載った場合</p> $\max Mx = 1/8w(b-a)(2l-b+a)$		<p>(10)</p> $R_A = -P \frac{a}{l} \quad R_B = P \frac{a+l}{l}$ $S_{A-B} = -R_A \quad S_{B-C} = P$ $M_B = R_A l = -Pa, M_{x_2} = -Px_2$ $Mx_1 = R_A x_1$ <p>(11)</p> $R_A = \frac{w(l+a)(l-a)}{2l} \quad \text{若し } a > l \text{ ならば } R_A \text{ は負となる。}$ $R_B = \frac{w(l+a)^2}{2l}$ $Sx_1 = R_A - wx_1 \quad Sx_2 = wx_2$ $S_B = R_A - wl$ $Mx_1 = R_A x_1 - \frac{wx_1^2}{2}$ $\left(x_1 = \frac{l^2 - a^2}{2l} \text{ の場合} \right)$ $\max M_B = \frac{w(l+a)^2(l-a)^2}{8l^2}$ $M_B = -\frac{wa^2}{2} \quad Mx_2 = -\frac{wx_2^2}{2}$
	<p>(5)</p> $R_A = R_B = \frac{wl}{4}, \max M = \frac{wl^2}{12}$ $Sx = \frac{w}{4l}(l^2 - 4x^2)$ $Mx = \frac{wx}{12l}(3l^2 - 4x^2)$		<p>(12)</p> $R_A = \frac{P_1(l+a) - P_2 b}{l}$ $R_B = \frac{P_2(l+b) - P_1 a}{l}$ $M_A = -P_1 a \quad M_B = -P_2 b$ $Mx = R_A x - P_1(a+x)$
	<p>(6)</p> $R_A = \frac{w_1 l}{6} + \frac{w_2 l}{2}$ $R_B = \frac{w_1 l}{3} + \frac{w_2 l}{2}$ $Sx = \frac{w_1}{6l}(l^2 - 3x^2) + \frac{w_2}{2}(l-2x)$ $Mx = \frac{w_1 x}{2}(l-x) + \frac{w_2 x}{6l}(l^2 - x^2)$ $\max M = \frac{l^2}{16}(2w_2 + w_1) \text{ 近似式}$ $\max \delta = \frac{5l^4}{768EI}(w_1 + 2w_2)$		<p>(13)</p> $R_A = \frac{wL(L/2-b)}{l} \quad R_B = \frac{wL(L/2-a)}{l}$ <p>若し $a = b = l_1$ ならば</p> $R_A = R_B = \frac{1}{2}wl + w_1$ $M_A = -\frac{wa^2}{2} \quad M_B = -\frac{wb^2}{2}$ $Mx = R_A x - \frac{w(a+x)^2}{2}$