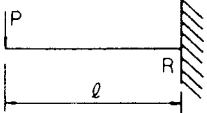
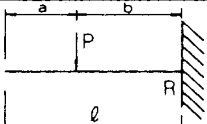
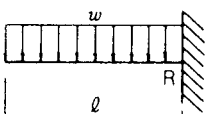
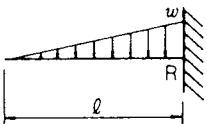
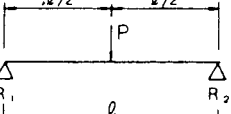
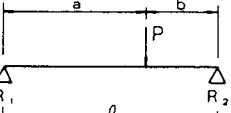
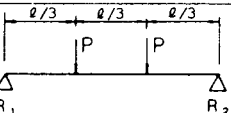
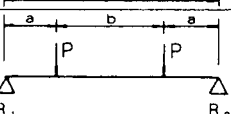
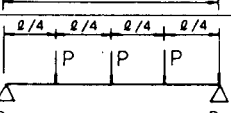
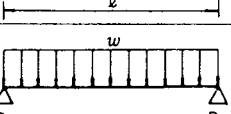
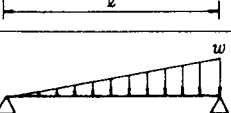
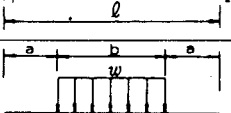


# ●仮設工事強度計算における定数

## 片持・単純梁の荷重公式

梁	荷重条件	反力 R	最大剪断力 $Q_{max}$	最大曲げモーメント $M_{max}$	最大たわみ $\delta_{max}$
片持梁		$R = P$	$Q_{max} = P$	$M_{max} = Pl$	$\delta_{max} = \frac{Pl^3}{3EI}$
		$R = P$	$Q_{max} = P$	$M_{max} = Pb$	$\delta_{max} = \frac{Pb^3}{3EI} (1 + \frac{3a}{2b})$
		$R = wl$	$Q_{max} = wl$	$M_{max} = \frac{wl^2}{2}$	$\delta_{max} = \frac{wl^4}{8EI}$
		$R = \frac{wl}{2}$	$Q_{max} = \frac{wl}{2}$	$M_{max} = \frac{wl^2}{6}$	$\delta_{max} = \frac{wl^4}{30EI}$
単純梁		$R_1 = R_2 = \frac{P}{2}$	$Q_{max} = \frac{P}{2}$	$M_{max} = \frac{Pl}{4}$	$\delta_{max} = \frac{Pl^3}{48EI}$
		$R_1 = \frac{Pb}{l}$ $R_2 = \frac{Pa}{l}$	$Q_{max} = \frac{Pa}{l}$	$M_{max} = \frac{Pab}{l}$	$\delta_{max} = \frac{Pb\sqrt{(\ell^2 - b^2)^3}}{9\sqrt{3}EI}$
		$R_1 = R_2 = P$	$Q_{max} = P$	$M_{max} = \frac{Pl}{3}$	$\delta_{max} = \frac{23Pl^3}{648EI}$
		$R_1 = R_2 = P$	$Q_{max} = P$	$M_{max} = Pa$	$\delta_{max} = \frac{Pl^3}{24EI} (\frac{3a}{l} - \frac{4a^3}{l^3})$
		$R_1 = R_2 = \frac{3P}{2}$	$Q_{max} = \frac{3P}{2}$	$M_{max} = \frac{Pl}{2}$	$\delta_{max} = \frac{19Pl^3}{384EI}$
		$R_1 = R_2 = \frac{wl}{2}$	$Q_{max} = \frac{wl}{2}$	$M_{max} = \frac{wl^2}{8}$	$\delta_{max} = \frac{5wl^4}{384EI}$
		$R_1 = \frac{wl}{6}$ $R_2 = \frac{wl}{3}$	$Q_{max} = \frac{wl}{3}$	$M_{max} = \frac{2wl^2}{9\sqrt{3}}$	$\delta_{max} = 0.00653 \frac{wl^4}{EI}$
		$R_1 = R_2 = \frac{wb}{2}$	$Q_{max} = \frac{wb}{2}$	$M_{max} = \frac{wb}{8} (2l - b)$	$\delta_{max} = \frac{wb}{384EI} (8l^2 - 4lb' + b')$