

Tableau intégrale de Mohr

Remarque : Ne pas oublier de multiplier les résultats par $\frac{1}{EI}$

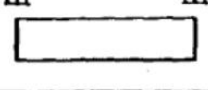
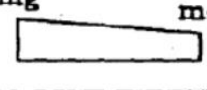
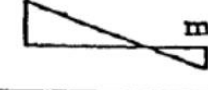
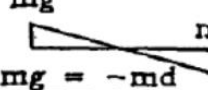
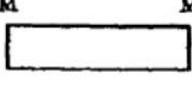
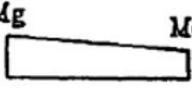
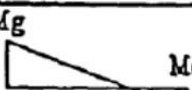
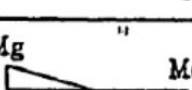
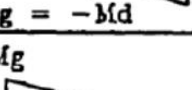
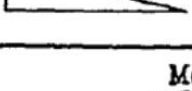
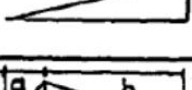
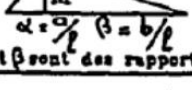
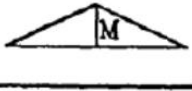


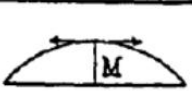

Introduire M et m avec leur SIGNE				
	M.m	$\frac{1}{2} M(mg+md)$	$\frac{1}{2} M(mg+md)$	0
	$\frac{1}{2} m(Mg+Md)$	$\frac{1}{6}(2Mgmg+Mgmd+Mdmg+2Mdmd)$	$\frac{1}{6}(2Mgmg+Mgmd+Mdmg+2Mdmd)$	$\frac{1}{6} mg(Mg-Md)$
	$\frac{1}{2} m(Mg+Md)$	$\frac{1}{6}(2Mgmg+Mgmd+Mdmg+2Mdmd)$	$\frac{1}{6}(2Mgmg+Mgmd+Mdmg+2Mdmd)$	$\frac{1}{6} mg(Mg-Md)$
 Mg = -Md	0	$\frac{1}{6} Mg(mg-md)$	$\frac{1}{6} Mg(mg-md)$	$\frac{1}{3} Mgmg$
	$\frac{1}{2} Mgm$	$\frac{1}{6} Mg(2mg+md)$	$\frac{1}{6} Mg(2mg+md)$	$\frac{1}{6} Mgmg$
	$\frac{1}{2} Mdm$	$\frac{1}{6} Md(mg+2md)$	$\frac{1}{6} Md(mg+2md)$	$-\frac{1}{6} Mdmg$
 $\alpha = \frac{a}{l}$ $\beta = \frac{b}{l}$ <small>α et β sont des rapports</small>	$\frac{1}{2} Mm$	$\frac{1}{6} M[mg(1+\beta)+md(1+\alpha)]$	$\frac{1}{6} M[mg(1+\beta)+md(1+\alpha)]$	$\frac{1}{6} Mmg(1-2\alpha)$
	$\frac{1}{2} Mm$	$\frac{1}{4} M(mg+md)$	$\frac{1}{4} M(mg+md)$	0
	$\frac{1}{3} Mgm$	$\frac{1}{12} Mg(3mg+md)$	$\frac{1}{12} Mg(3mg+md)$	$\frac{1}{6} Mgmg$
	$\frac{1}{3} Mdm$	$\frac{1}{12} Md(mg+3md)$	$\frac{1}{12} Md(mg+3md)$	$\frac{1}{6} Mdmd$
	$\frac{2}{3} Mm$	$\frac{1}{3} M(mg+md)$	$\frac{1}{3} M(mg+md)$	0
	$\frac{2}{3} Mgm$	$\frac{1}{12} Mg(5mg+3md)$	$\frac{1}{12} Mg(5mg+3md)$	$\frac{1}{6} Mgmg$
	$\frac{2}{3} Mdm$	$\frac{1}{12} Md(3mg+5md)$	$\frac{1}{12} Md(3mg+5md)$	$-\frac{1}{6} Mdmg$

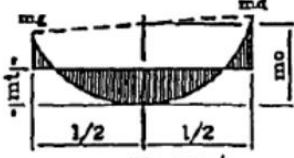
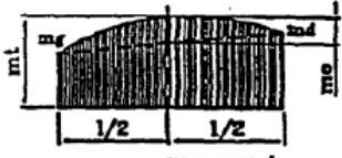
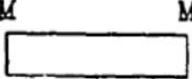
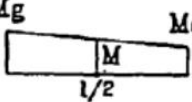
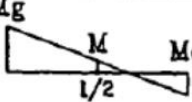
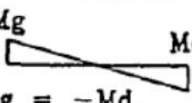
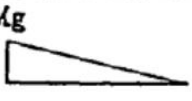
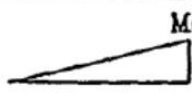
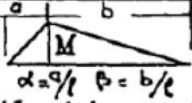
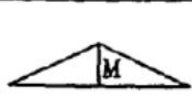
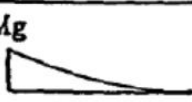
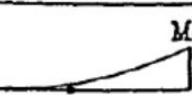
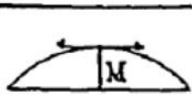
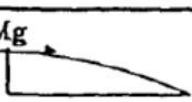
Tableau intégrale de Mohr

Introduire M et m avec leur SIGNE			 α et β sont des rapports	
	$1/2 Mmg$	$1/2 Mmd$	$1/2 Mm$	$1/2 Mm$
	$1/6 mg(2Mg+Md)$	$1/6 md(Mg+2Md)$	$1/6 m[Mg(1+\beta) + Md((1+\alpha))]$	$1/4 m(Mg+Md)$
	$1/6 mg(2Mg+Md)$	$1/6 md(Mg+2Md)$	$1/6 m[Mg(1+\beta) + Md((1+\alpha))]$	$1/4 m(Mg+Md)$
 $Mg = -Md$	$1/6 Mgm$	$-1/6 Mgm$	$1/6 Mgm(1-2\alpha)$	0
	$1/3 Mgm$	$1/6 Mgm$	$1/6 Mgm(1+\beta)$	$1/4 Mgm$
	$1/6 Mdm$	$1/3 Mdm$	$1/6 Mdm(1+\alpha)$	$1/4 Mdm$
 α et β sont des rapports	$1/6 Mmg(1+\beta)$	$1/6 Mmd(1+\alpha)$	$1/3 Mm$	$1/12 Mm(3-4\alpha^2)/\beta$ valable pour $\alpha < \beta$
	$1/4 Mmg$	$1/4 Mmd$	$1/12 Mm(3-4\alpha^2)/\beta$ valable pour $\alpha < \beta$	$1/3 Mm$
	$1/4 Mgm$	$1/12 Mdm$	$1/12 Mdm(1+\beta+\beta^2)$	$7/48 Mgm$
	$1/12 Mdm$	$1/4 Mdm$	$1/12 Mdm(1+\alpha+\alpha^2)$	$7/48 Mdm$
	$1/3 Mmg$	$1/3 Mmd$	$1/3 Mm(1+\alpha\beta)$	$5/12 Mm$
	$5/12 Mgm$	$1/4 Mgm$	$1/12 Mgm(5-\alpha-\alpha^2)$	$17/48 Mgm$
	$1/4 Mdm$	$5/12 Mdm$	$1/12 Mdm(5-\beta-\beta^2)$	$17/12 Mdm$

tableau intégrale de Mohr

Introduire M et m avec leur SIGNE					
	$1/3 Mmg$	$1/3 Mmd$	$2/3 Mm$	$2/3 Mmg$	$2/3 Mmd$
	$1/12 mg(3Mg+Md)$	$1/12 md(3Md+Mg)$	$1/3 m(Mg+Md)$	$1/12 mg(5Mg+3Md)$	$1/12 md(3Mg+5Md)$
	$1/12 mg(3Mg+Md)$	$1/12 md(3Md+Mg)$	$1/3 m(Mg+Md)$	$1/12 mg(5Mg+3Md)$	$1/12 md(3Mg+5Md)$
	$1/6 Mgmg$	$1/6 Mdmd$	0	$1/6 Mgmg$	$1/6 Mdmd$
	$1/4 Mgmg$	$1/12 Mgmd$	$1/3 Mgm$	$5/12 Mgmg$	$1/4 Mgmd$
	$1/12 Mdmg$	$1/4 Mdmd$	$1/3 Mdm$	$1/4 Mdmg$	$5/12 Mdmd$
	$1/12 Mmg(1+\beta+\beta^2)$	$1/12 Mmd(1+\alpha+\alpha^2)$	$1/3 Mm(1+\alpha\beta)$	$1/12 Mmg(5-\alpha-\alpha^2)$	$1/12 Mmd(5-\beta-\beta^2)$
	$7/48 Mmg$	$7/48 Mmd$	$5/12 Mm$	$17/48 Mmg$	$17/48 Mmd$
	$1/5 Mgm$	$1/30 Mgmd$	$1/5 Mgm$	$3/10 Mgmg$	$2/15 Mgmd$
	$1/30 Mdmg$	$1/5 Mdmd$	$1/5 Mdm$	$2/15 Mdmg$	$3/10 Mdmd$
	$1/5 Mmg$	$1/5 Mmd$	$8/15 Mm$	$7/15 Mmg$	$7/15 Mmd$
	$3/10 Mgm$	$2/15 Mgmd$	$7/15 Mgm$	$8/15 Mgmg$	$11/30 Mgmd$
	$2/15 Mdmg$	$3/10 Mdmd$	$7/15 Mdm$	$11/30 Mdmg$	$8/15 Mdmd$

Tableau intégrale de Mohr

Introduire M et m avec leur SIGNE	$\frac{1}{I} \int M^2 dx$	  $m_o = m_t + \frac{m_d + m_t}{2}$ $m_o = m_t - \frac{m_d + m_t}{2}$
	M^2	$\frac{1}{6} M(mg + 4mt + md)$
	$\frac{1}{3}(Mg^2 + MgMd + Md^2)$	$\frac{1}{6} (Mgmg + 4Mmt + Mdmd)$
	$\frac{1}{3}(Mg^2 + MgMd + Md^2)$	$\frac{1}{6} (Mgmg + 4Mmt + Mdmd)$
 <p>$Mg = -Md$</p>	$\frac{1}{3} Mg^2$	$\frac{1}{6} Mg(mg - md)$
	$\frac{1}{3} Mg^2$	$\frac{1}{6} Mg(mg + 2mt)$
	$\frac{1}{3} Md^2$	$\frac{1}{6} Md(2mt + md)$
 <p>$\alpha = a/l$ $\beta = b/l$ α et β sont des rapports</p>	$\frac{1}{3} M^2$	$\frac{M}{6} \left[-2m_o(1 + \alpha + \alpha^2) + (4m_o - m_g + m_d)(1 + \alpha) + 3m_g \right]$
	$\frac{1}{3} M^2$	$\frac{1}{24} M(mg + 10mt + md)$
	$\frac{1}{5} Mg^2$	$\frac{1}{60} Mg[5(3mg + md) + 12m_o]$
	$\frac{1}{5} Md^2$	$\frac{1}{60} Md[5(mg + 3md) + 12m_o]$
	$\frac{8}{15} M^2$	$\frac{1}{15} M[5(mg + md) + 8m_o]$
	$\frac{8}{15} Mg^2$	ou $\frac{1}{60} Mg[5(5mg + 3md) + 28m_o]$ $\frac{1}{60} Mg(11mg + md + 28mt)$