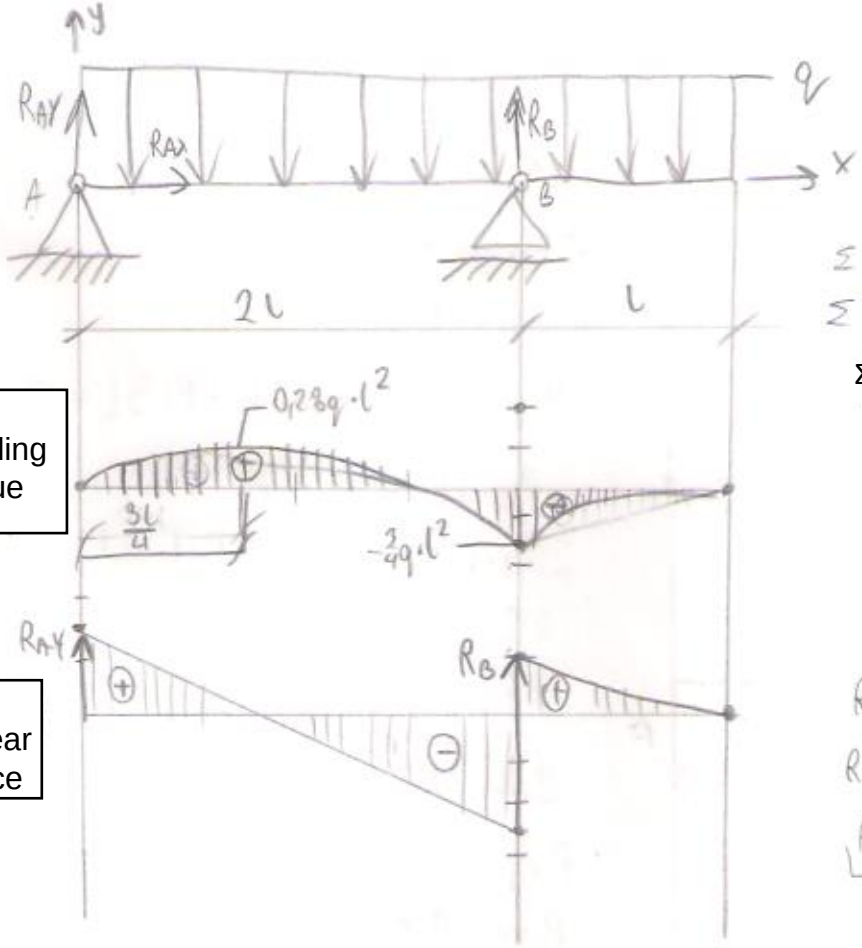

T_b - bending torque

F_s - shear force

$\Sigma F_{ix}=0 \quad R_{AX}=0$

$\Sigma F_{iy}=0 \quad R_{AY}-q\cdot 3l+R_B=0$

$\Sigma T_{iA}=0 \quad q\cdot 3l\cdot\frac{3}{2}l-R_B\cdot 2l=0$

$R_B\cdot 2l=\frac{9}{2}q\cdot l^2 / :2l$

$R_B=\frac{9}{4}q\cdot l$

$R_B=2\frac{1}{4}q\cdot l$

$R_{AY}=3q\cdot l-R_B$

$R_{AY}=3q\cdot l-2\frac{1}{4}q\cdot l$

$R_{AY}=\frac{3}{4}\cdot q\cdot l$

$0<x<2l$

$F_s=R_{AY}-q\cdot x$

$T_b=R_{AY}\cdot x-q\cdot x\cdot\frac{x}{2}$

for $x=0$

$T_b=0$

for $x=2l$

$T_b=\frac{3}{4}q\cdot l\cdot 2l-q\cdot\frac{(2l)^2}{2}=1\frac{1}{2}ql^2-2ql^2=-\frac{1}{2}q\cdot l^2$

for $x=0$

$F_s=\frac{3}{4}\cdot q\cdot l$

for $x=2l$

$F_s=\frac{3}{4}q\cdot l-2q\cdot l$

$F_s=-1\frac{1}{4}q\cdot l$

$dT_b/dx=R_{AY}-q\cdot x$

$\frac{3}{4}\cdot q\cdot l-q\cdot x=0$

$q\cdot x=\frac{3}{4}q\cdot l / :q$

$x=\frac{3}{4}l$

$T_b(3/4l)=\frac{3}{4}q\cdot l\cdot(\frac{3}{4}\cdot l)-q\cdot\frac{(\frac{3}{4}l)^2}{2}$

$T_b(3/4l)=\frac{3}{16}q\cdot l^2-\frac{9}{32}q\cdot l^2$

$T_b(3/4l)=\frac{9}{32}q\cdot l^2$

$T_b(3/4l)=0{,}28q\cdot l^2$

$2l<x<3l$

$F_s=R_{AY}-q\cdot x+R_B$

$T_b=R_{AY}\cdot x-q\cdot x\cdot\frac{x}{2}+R_B(x-2l)$

for $x=2l$

$T_b=\frac{3}{4}q\cdot l\cdot(2l)-q\cdot\frac{(2l)^2}{2}+2\frac{1}{4}q\cdot l(2l-2l)$

$T_b=\frac{6}{4}q\cdot l^2-2ql^2$

$T_b=-\frac{1}{2}q\cdot l^2$

for $x=3l$

$T_b=\frac{3}{4}q\cdot l\cdot(3l)-q\cdot\frac{(3l)^2}{2}+2\frac{1}{4}q\cdot l\cdot l$

$T_b=\frac{9}{4}q\cdot l^2-\frac{9}{2}q\cdot l^2+2\frac{1}{4}q\cdot l^2$

$T_b=(\frac{9}{4}-\frac{18}{4}+\frac{9}{4})q\cdot l^2$

$T_b=0$

for $x=2l$

$F_s=\frac{3}{4}q\cdot l-2q\cdot l+2\frac{1}{4}q\cdot l$

$F_s=q\cdot l$

for $x=3l$

$F_s=\frac{3}{4}q\cdot l-3q\cdot l+2\frac{1}{4}q\cdot l=0$