

Design Variables	
Modulus of Elasticity (psi, N/mm <sup>2</sup> ) E =	35000000.00
Moment of Inertia (in <sup>4</sup> , mm <sup>4</sup> ) I =	61.900
Distance to Neutral Axis (in, mm) n =	4.070
Line Load (lb/in, N/mm) w =	50.000
Length (in, mm) L =	20.000
Length (in, mm) x =	10.000
Results	
Total Load (lb, N) W =	500.000
Reaction R <sub>A</sub> (lbs, N) =	275.000
Reaction R <sub>B</sub> (lbs, N) =	225.000
Moment M <sub>B</sub> (lbs-in, N-mm) =	1166.667
Moment M <sub>x</sub> (lbs-in, N-mm) =	666.667
Moment M <sub>max</sub> @ x = 0.329L (lbs-in, N-mm) =	846.000
Moment M <sub>max</sub> @ x = L (lbs-in, N-mm) =	-1166.667
Shear V <sub>x</sub> (lbs, N) =	-100.000
Deflection y <sub>max</sub> @ x = 0.402L (in, mm) =	1.1244e-5
Deflection y <sub>x</sub> (in, mm) =	3.5580e-5
Slope θ <sub>A</sub> (radian) =	-1.083e+13