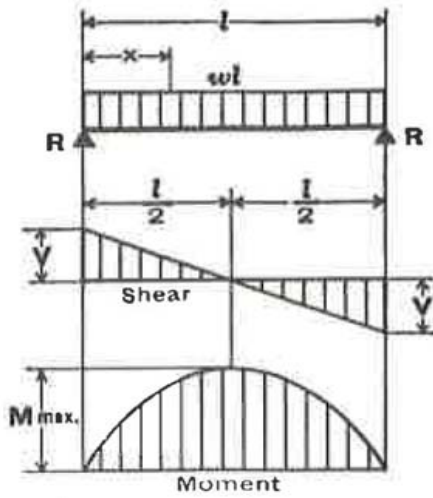


UNIFORMLY DISTRIBUTED LOAD ON SIMPLY SUPPORTED BEAM

SPAN PARAMETERS

Intensity of load (w): 700 pounds per f
 Length of Span (l): 20 feet
 Point of interest (x): 0 feet



REACTIONS, SHEAR & MOMENT

Both reactions are equal: 7000 pounds
 V max: 7000 pounds
 Vx: 7000 pounds
 M max: 35000 foot pounds
 Mx: 0 foot pounds

BEAM SECTION & MATERIAL

Base of Rectangle: 8 inches
 Height of Rectangle: 12 inches
 Modulus of Elasticity (E): 3.00E+07 PSI

NOTE: This spreadsheet is valid only for rectangular beams.

Section Modulus (S):	192	inches ³	
Moment of Inertia (Ixx):	1152	inches ⁴	Calculated 1152 inches ⁴
Optional Ixx override:		inches ⁴	
Beam Cross-section Area:	96	inches ²	

BEAM STRESSES

Max Bending Stress: 2188 PSI
 Bending Stress at x: 0 PSI

DEFLECTIONS

Max Deflection: 0.073 Inches
 Deflection at x: 0.000 Inches
 Part 1 0.00E+00
 Part 2 13824000

Shear Stress Distribution in Beam Cross-Section - SHEAR AT X

Height	a	ybar	Q	Tau b
100%	0	6	0	0.0
90%	9.6	5.4	51.84	39.4
80%	19.2	4.8	92.16	70.0
70%	28.8	4.2	120.96	91.9
60%	38.4	3.6	138.24	105.0
50%	48	3	144	109.4
40%				105.0
30%				91.9
20%				70.0
10%				39.4
0%				0.0

symmetry

