ME 1028 (06-1)
HW#4
Due on Friday, Oct. 7th

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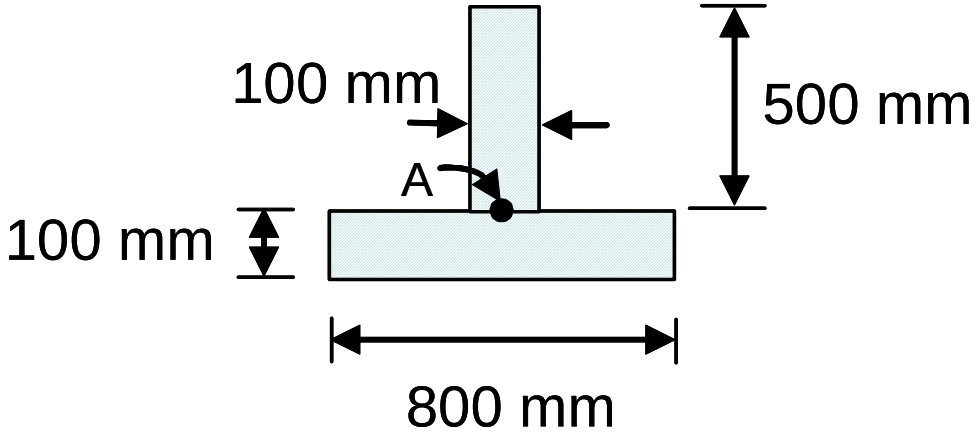
Name

(1) For the loading conditions as in HW#3, if the cross–section of beam changed from rectangular to the figure shown below ($I \neq 6 \times 10^{-3}$ m^4), determine
(1) The shear stress at point A when x = 4.321 m
(2) Maximum shear stress in the beam
(3) Tensile flexural stress (normal stress) in the beam when x = 6.543 m
(4) Maximum tensile flexural stress (normal stress) in the beam



(2) If the yield strength for steel is 18 ksi and the beam is between simple supports. Steel angles 3 x 3 x ¼ –in and 72–in long, were used. Find the maximum safe uniformly distributed load that the beam can carry with safety factor of 1.5 (Use Table A–8 on page 763).