

7-4. A cantilever is subject to a vertical force $F \sim N(1.2, 0.1^2)$ kN as shown. The dimensions of the cantilever are also shown in the figure. If the allowable bending stress of the cantilever is $S_a \sim N(22, 2^2)$ MPa, determine the probabilities of failure caused by excessive bending stress.

Neglect the weight of the cantilever. (Ans. $p_f = 7.38 \times 10^{-4}$)

