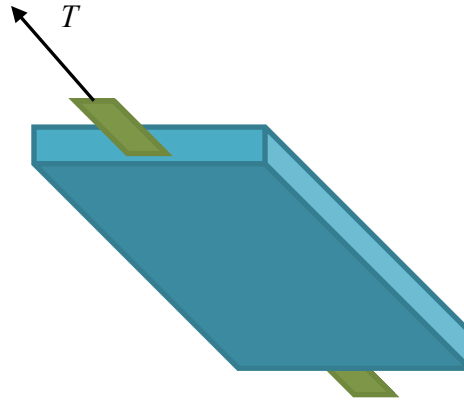


15. A random force  $T$  is applied to pull a bookmark with a width of 1 in. The weight of the book is  $W \sim N(12, 0.15^2)$  lb, and the coefficient of static friction between the bookmark and the paper is  $\mu_s=0.6$ . If the pages are 8 in. (width) by 10 in. (length), determine the distribution of the minimum force  $T$  that will make the bookmark start to move out. Assume the pressure on each page and the bookmark is uniform.



**Solution:** The minimum force is  $T \sim N(0.9, 0.0113)$  lb.