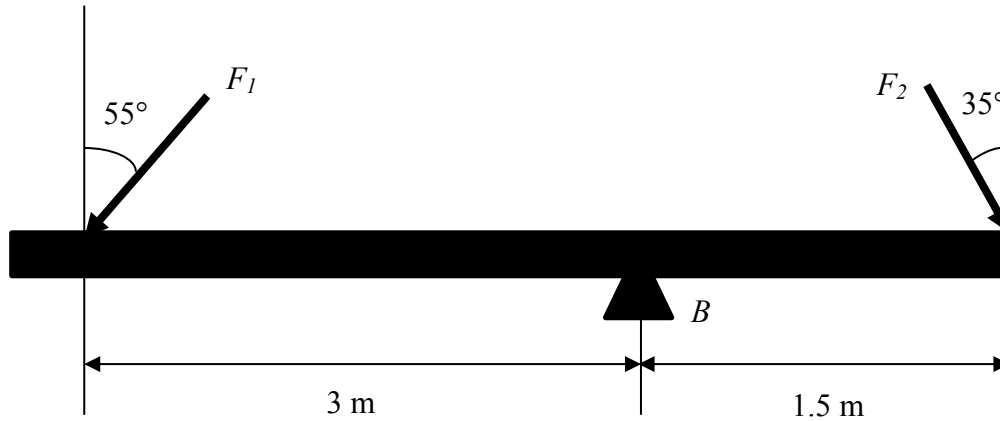


17. F_1 and F_2 are independently and normally distributed with $F_1 \sim N(1300, 100^2)$ N and $F_2 \sim N(2600, 150^2)$ N, respectively, determine the probability of failure if the distribution of the allowable moment at point B is $M \sim N(1800, 110^2)$ N, clockwise. M , F_A , and F_B are independently distributed.



Solution: The probability of the beam failure is 0.0011.