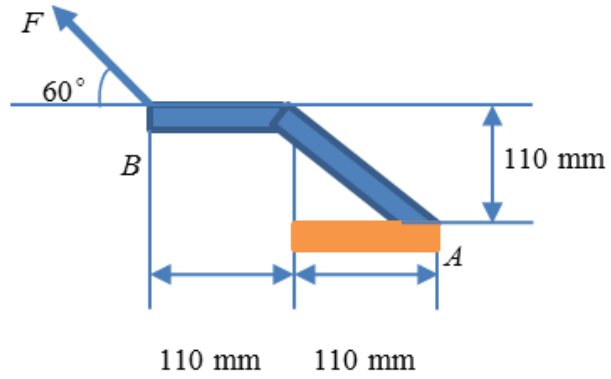23. A force F follows a normal distribution $F \sim N(700, 50^2)$ N , and it acts on the bracket as shown. Determine the distribution of the moment of the force about point A.

Solution: The distribution of M_A is $M_A \sim N(66.68, 4.76^2)$ N·m, clockwise.