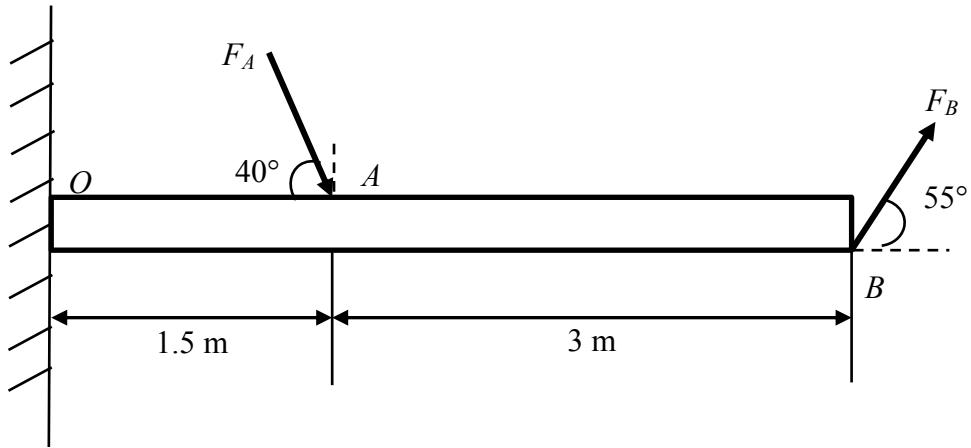15. Determine the distribution of the resultant moment acting on the beam at O. The two forces are normally and independently distributed with $F_A \sim N(250, 12^2)$ N and $F_B \sim N(800, 54^2)$ N .

Solution: $M_O \sim N(2707.9, 199.4^2)$ N·m , anticlockwise