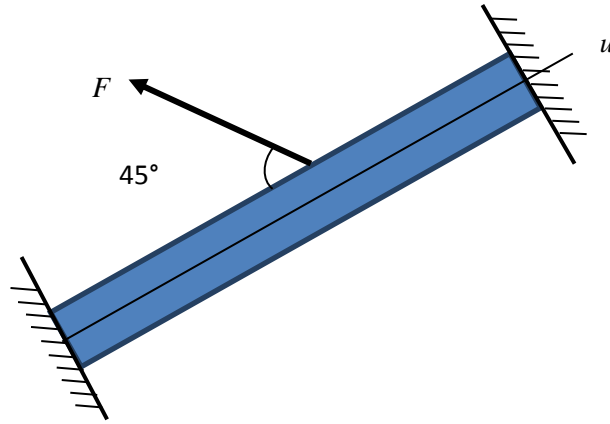


8. The force acting on a beam is normally distributed with $F \sim N(560, 4^2)$ lb. Find the distributions of its two components, one parallel and the other one perpendicular to the u axis.



Solution

parallel force: $F_1 \sim N(-396, -2.83^2)$ lb ; perpendicular force: $F_2 \sim N(396, 2.83^2)$ lb . **Ans.**