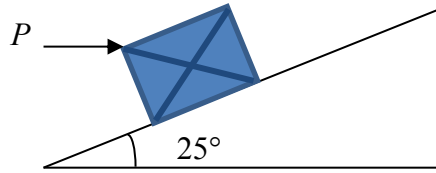12. A horizontal force $P \sim N(920, 20^2)$ N acts on a crate whose weight is $W \sim N(4000, 20^2)$ N .   The coefficient of static friction is $\mu_s = 0.25$. Determine the probability that the crate will slip. P and W are distributed independently.

Solution

The probability that the crate will slip is 0.0077. **Ans.**