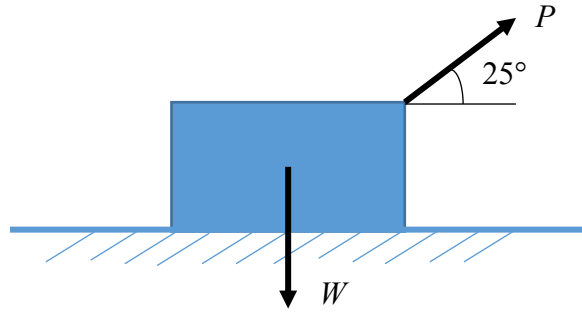


13. A force $P \sim N(1000, 20^2)$ N acts on a crate whose weight is $W \sim N(4000, 20^2)$ N. The coefficient of static friction between the crate and floor is $\mu_s = 0.25$. Determine the probability that the crate will move forward. P and W are distributed independently.



Solution

The probability that the crate will move forward is 0.7364. **Ans.**