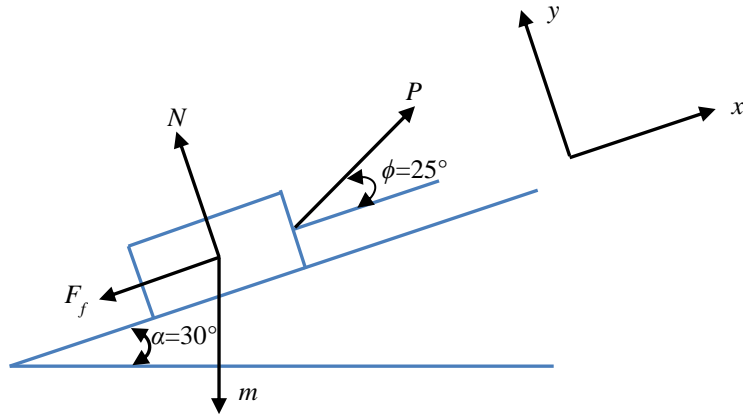


6. The block which has a normally distributed weight $m \sim N(5, 0.05^2)$ kg is being pulled up the inclined plane of slope α using another independent normally distributed external force $P \sim N(50, 1.5^2)$ N. Determine the probability that the external force P can pull the block up if the coefficient of friction is $\mu_s = 0.4$.



Answer

The probability that the force P can pull the block up is 99.68%.