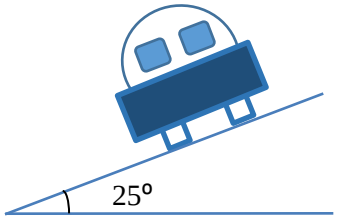
11. A car travels at a constant velocity along a straight and banked road. The tires are perpendicular to the road. The maximum static friction force follows a normal distribution $F \sim N(1550, 20^2)$ N . The car and its passengers have a mass of $m \sim N(350, 8^2)$ kg . Find the probability that the car will slip. The coefficient of static friction is $\mu_A = 0.4$ between the car and road. F and m are independent.



Solution

The probability that the car will slip is 0.0053. **Ans**.