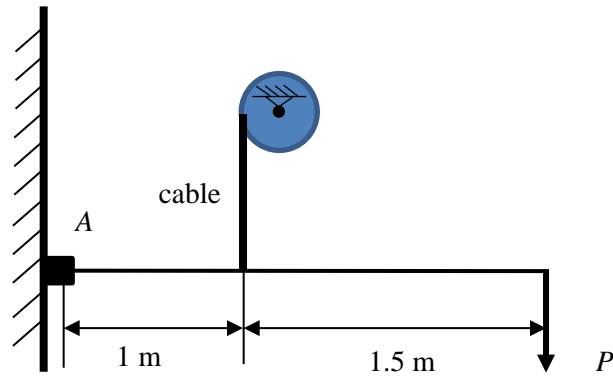15. The resistance of the cable follows a normal distribution $S \sim (1300, 15^2)$ N. Determine the probability that the cable will break if a force applied in the system is $P \sim (500, 5^2)$ N. $S$ and $P$ are independently distributed.



**Solution**

The probability that the cable will break is 0.0052.  **Ans.**