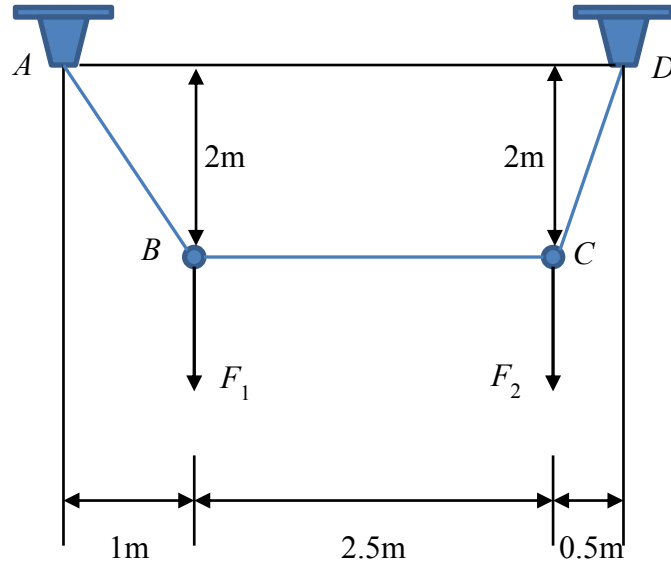1. Two independent forces $F_1 \sim N(15, 0.5^2)$ kg and $F_2 \sim N(18, 1.0^2)$ kg act at points B and C of cable $ABCD$. (1) Determine the tension in the cable CD. (2) If the maximum load of the cable is 210 N, what is the probability the cable CD might fail?

Answer: (1) $T \sim N(197.18, 8.94^2)$ lb

(2) $P=0.0757$