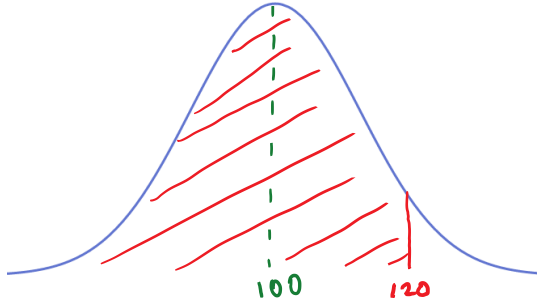
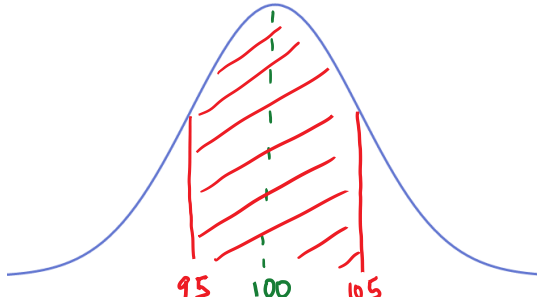
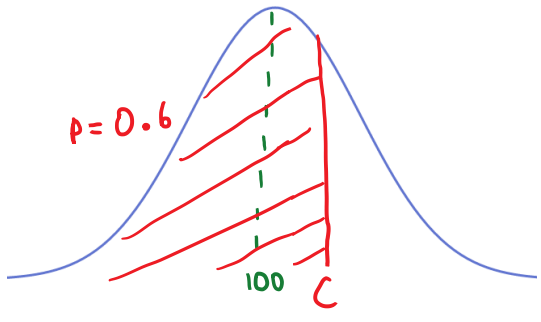


The random variable X is normally distributed with a mean of 100 and a standard deviation of 15.

- Write down $P(X < 120)$
- Write down $P(95 < X < 105)$
- $P(X < c) = 0.6$. Write down the value of c
- Find the interquartile range of X

<p>a) Lower = -9×10^{99} Upper = 9×10^{99} $\sigma = 15$ $\mu = 100$</p> <p>$P(X < 120) \approx 0.909$</p>	
<p>b) Lower = -9×10^{99} Upper = 9×10^{99} $\sigma = 15$ $\mu = 100$</p> <p>$P(95 < X < 105) \approx 0.261$</p>	
<p>c) $P(X < c) = 0.6$ InvNorm(0.6) {left tail} Tail = Left Area = 0.6 $\sigma = 15$ $\mu = 100$</p> <p>$c \approx 104$</p>	
<p>d) Interquartile Range = $Q_3 - Q_1$, where $P(X < Q_1) = 0.25$ $P(X < Q_3) = 0.75$</p> <p>$Q_1 \approx 89.9, Q_3 \approx 110$</p> <p>Interquartile Range $\approx 110 - 89.9 \approx 20.1$</p>	