**3E Finding the Mean or Standard Deviation**

1. The random variable $X\~N(μ,3^{2})$. Given that $P\left(X>20\right)=0.2$, find the value of $μ$.
2. A machine makes metal sheets with width $X cm$, modelled as a normal distribution such that $X\~N(50,σ^{2})$.
3. Given that $P\left(X<46\right)=0.2119$, find the value of $σ$.
4. Find the 90th percentile of the widths
5. The random variable $X\~N(μ,σ^{2})$. Given that $P\left(X>35\right)=0.025$ and $P\left(X<15\right)=0.1469$, find the values of $μ$ and $σ$.