Normal Distribution : Finding μ & σ

Answers are approximate... if you're in the vicinity of what I've got, you're probably right.

1. $X \sim N(\mu, 4^2)$ and $\mathbb{P}(X > 10) = 0.3$. Find μ. $\boxed{\mu = 7.90}$
2. $X \sim N(51, \sigma^2)$ and $\mathbb{P}(X < 48) = 0.21$. Find σ. $\boxed{\sigma = 3.72}$
3. $X \sim N(\mu, 17)$ and $\mathbb{P}(X > 13) = 0.8$. Find μ. $\boxed{\mu = 16.47}$
4. $X \sim N(900, \sigma^2)$ and $\mathbb{P}(X < 990) = 0.84$. Find σ. $\boxed{\sigma = 90.54}$
5. $X \sim N(\mu, 5^2)$ and $\mathbb{P}(X < 21) = 0.97$. Find μ. $\boxed{\mu = 11.60}$
6. $X \sim N(28, \sigma^2)$ and $\mathbb{P}(X > 23) = 0.527$. Find σ. $\boxed{\sigma = 73.5}$

Now for both...

7. $X \sim N(\mu, \sigma^2)$ and $\mathbb{P}(X > 7) = 0.3$ and $\mathbb{P}(X > 8) = 0.2$. Find μ and σ. $\boxed{\mu = 5.35, \sigma = 3.14}$
8. $X \sim N(\mu, \sigma^2)$ and $\mathbb{P}(X > 51) = 0.29$ and $\mathbb{P}(X < 20) = 0.13$. Find μ and σ. $\boxed{\mu = 40.79, \sigma = 18.45}$

Now for forward and backwards...

9. $X \sim N(\mu, \sigma^2)$ and $\mathbb{P}(X < 35) = 0.9$ and $\mathbb{P}(X < 40) = 0.95$. Find $\mathbb{P}(X > 42)$. $\boxed{0.0367}$