Problems referred to by number (i.e. Problem 2.13) come from your class text, *Pattern Classification* by Duda, Hart, and Stork. You do not need to typeset your answers, legible hand-written responses are fine.

1. Problem 2.13
2. Problem 2.18
3. Problem 3.17
Note that part (e) asks what $\hat{\theta}$ needs to be so that $p(x|\hat{\theta}) = p(\theta|D)$. (This would be the result if the posterior was concentrated around a single point, i.e. $p(\theta|D) = \delta(\theta - \hat{\theta})$, where $\delta(\cdot)$ is the Dirac delta function satisfying $\int f(x)\delta(x - x_0)dx = f(x_0)$).