Section 5 of chapter 2 is complicated. Most of the examples required several readings before I understood their processes. I am unsure if I have grasped the details of each proof.

From what I can tell, a manifold is an object of $< n$ dimensions in $\mathbb{R}^n$ such that every point on it has a tangent (hyper) plane. This object is further dividable into patches. I was not able to tell from the definition if manifolds must be bounded (as is the case for the provided examples).

The author worries me by utilizing the implicit function theorem and the implicit mapping theorem, but stating their proofs lie in the next chapter. Since each section builds off the previous, pulling from the future like this seems to be a risk for circular logic.