B.1. Suppose $\xi \oplus \xi$ is trivial, then there exists a non-vanishing global section of it. Compose that with the projection $S^2 \to \mathbb{RP}^2$, we get a map $S^2 \to \mathbb{R}^4$, $x \to (r(x)x, s(x)x)$, where $r(x), s(x)$ are two continuous odd functions on $S^2$ which don’t vanish simultaneously. But when we apply Borsuk-Ulam theorem, we see that the map $S^2 \to \mathbb{R}^2$ given by $(r(x), s(x))$ must vanish somewhere. Contradiction.

B.2. $\bar{w} = (1 + \sum_{i=1}^{n} w_i)^{-1} = 1 + \sum_{i=1}^{n} w_i + (\sum_{i=1}^{n} w_i)^2 + (\sum_{i=1}^{n} w_i)^3 + \ldots$, then expand each term and we see the desired results.