- Compactly supported forms and cohomology algebra (important for Poincare duality for non-compact manifolds)
  - Eg. $H^n(R^n) = 0$. But it should not if there is duality!
  - Note: pull-back only well-defined for proper maps (so Poincare lemma is non-trivial)
  - Have push-forward for fiber bundles (which commutes with $d$)
- Compactly supported Poincare lemma
- $R^n$. (Integration)
  - Homotopic proper maps induce same pull-back on cohomology (NOTE: NEED HOMOTOPY TO BE PROPER)
  - Top compactly supported cohomology is one-dimensional. (by integration which is only defined for oriented manifolds)
  - Non-orientable case: top cohomology = 0. (Thus don’t have Poincare duality.)
  (Pull back to oriented double cover, which is injective on cohomology)