What carries over to Topological ~~Manifolds~~

- Meshing already applies to homeomorphisms

but no Jacobian.

- atlases can also be defined at this level, ditto maximal atlases.
- Nothing is stopping $f : M \to \mathbb{R}$ function on a manifold
  or $\lambda : I \to M$ curve in M
  being defined in the topological case.
- Chart independence of constructs is down to ordering chains of φ_i and φ_j^{-1} compositions, so that also carries over.

but no tgt vector notion → Tensors. → Commutators

- Maps $g : M \to N$ incl $g : M \to M$ carry over
  and can be considered in chart terms $I \xrightarrow{\lambda} M \xrightarrow{g} N \xrightarrow{f} \mathbb{R}$

but no push-forward, since that's based on $T_p(M)$

no Lie derivative

no integral curves

no 1-param xform group

- Product manifolds notion carries over
- Quotient manifolds notion carries over
- Manifolds with bdry carries over
- Orientability can be defined at the topological level

no Jacobian sign based criterion

Immersion, Embedding are its tgt spaces? There is a topological notion of embedding

Submanifold notion, and ~~that~~ they themselves are manifolds carries over.

no diffeos

homeomorphism group structure can itself be built up instead.

→ what is this, now Lie group structure is unavailable?

no affine connection

no metric