

## ASSIGNMENT 10

COLTON GRAINGER  
MATH 6230 DIFFERENTIAL GEOMETRY

**8-22:** A general Lie algebra.

**8-19:**  $\mathbf{R}^3$  with the cross-product.

**8-20:** An isomorphism to  $\mathbf{R}^3$  with the cross product.

**8-30:** The Lie algebras  $\mathfrak{su}(2)$  and  $\mathfrak{o}(3)$  are isomorphic  $\mathbf{R}^3$  with the cross product. What the fuck?