

1135-16-3210

Anne V Shepler*, ashepler@unt.edu, and **Victor Reiner**. *Invariant Theory of Reflection Groups*.

By the Chevalley, Shephard-Todd Theorem, the invariants in a polynomial algebra under the action of a reflection group, real or complex, form their own polynomial algebra. Solomon showed that a similar phenomenon occurs with exterior algebras: the invariants in the exterior algebra of differential forms again form their own exterior algebra. We apply techniques of Gutkin and Opdam on characters to extend Solomon's Theorem in classical invariant theory and examine combinatorial conjectures motivated by W-Catalan combinatorics. Joint work with Victor Reiner. (Received September 27, 2017)