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Henry P Towsner* (htowsner@math.upenn.edu), Department of Mathematics, David Rittenhouse Lab., 209 South 33rd Street, Philadelphia, PA 19104. *Computable Information in Ultraproducts*. Preliminary report.

Proofs involving ultraproducts are often described as non-constructive. In fact, almost all applications of ultraproducts to other areas of mathematics prove theorems which could have computable bounds, and, viewed correctly, the ultraproduct proof gives computable bounds.

These proofs often use highly non-computable statements as intermediate steps in the proof. However we can interpret these non-computable statements about the ultraproduct as more complicated but computable statements about the original structures. (Received August 09, 2015)