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**Danny W Turner\*** ([turnerd@winthrop.edu](mailto:turnerd@winthrop.edu)), Mathematics Department, Winthrop University, Rock Hill, SC 29733. *Utility Trailer Cargo Bed Optimization Problem*. Preliminary report.

This paper describes an interesting and practical integer linear programming problem. The problem is suitable for a small case study or class project. Modeling and solving the problem will involve basic research about the nomenclature and pricing of lumber products and the use of these products to cover the cargo bed of a small utility trailer. Additionally, the number of variables is large enough that some use of technology will typically be needed to find solution(s). The model has numerous practical variations, lending variety to its use in the undergraduate classroom. Approaches to solving the problem via the software packages SAS and Mathematica will be discussed. (Received September 22, 2005)