Abstract Submitted for the NWS19 Meeting of The American Physical Society

Analyzing exams: Are multiple-choice questions hard for the reasons we think? DEAN BRETLAND, PETER SHAFFER, University of Washington — Exam questions are typically written to differentiate between students who can and cannot apply the concepts they are learning. Students who score highly on an exam, in general, do better on individual questions than those who do not. On certain questions, however, the gap is quite large. In this talk we present an overview of a project at the University of Washington to identify and examine such questions in introductory algebra- and calculus-based physics courses. We hope to identify specific concepts and skills that seem to be particularly difficult for low-performing students and to develop interventions that can target those areas.

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Date submitted: 19 Apr 2019

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