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Group formation on physics exams CHRISTOPHER GARDNER, YINEBEB ZENAW, HUNTER CLOSE, STEVEN WOLF, Texas State University, Department of Physics — There have been recent national calls echoing the need to improve instruction in the scientific practices – scientific skills such as modeling, designing scientific experiments, and collaboration. Working together to solve a problem is one of the most fundamental skills a physicist will need to master to be effective after graduation. As our classrooms become more active and collaborative, we need to consider ways that our assessments can take on the same active and collaborative spirit that our classes have. One way that this is accomplished is through the use of group exams. Using a duplicate exam format, we are developing a method for analyzing group formation for a particular exam using the framework of network analysis. This method will be compared to self-reported student grouping data for verification. In the future, student participation in the network will be leveraged to study relationships between exam participation and broader student behaviors such as course grade and overall persistence in the discipline and retention at the university.

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