

Assignment #9  
Due: April 4<sup>th</sup>, 2023, 1:00 pm

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## 1 The AGV mechanism

**Problem 1.1.** [20 points] Consider the AGV mechanism introduced in the book (Section 10.4.7) and, without appealing to the Myerson-Satterthwaite impossibility theorem, prove that:

- (a) [10 points] AGV is truthful in *ex-interim* Bayes Nash equilibrium.
- (b) [4 points] AGV is *ex-post* budget-balanced.
- (c) [6 points] AGV is not *ex-interim* individual-rational.

## Academic Honesty Form

For this assignment, it is acceptable to collaborate with other students provided that you write up your solutions independently. The only reference materials that you can use are the course notes and textbook, and the reference textbooks listed on the course web page. In particular, getting help from students or course materials from previous years is not acceptable.

List any people you collaborated with:

- 1.
- 2.
- 3.

List any non-course materials you referred to:

- 1.
- 2.
- 3.

*Fill in this page and include it with your assignment submission.*