

Theorem 4.2 and Corollary 4.8 give $O(n)$ upper bounds on the three-party NOF communication complexity for *restricted* protocols in where Player 1 and Player 2 send independently messages to Player 3. In both cases there are also $O(n)$ *simultaneous message passing* protocols where Players 1,2 and 3 send independently messages to a referee. In the case of Theorem 4.2 this is trivial, since Player 3 can send i and j to the referee using only $2 \log n$ bits. In the case of Corollary 4.8 the protocol is as follows. Players 1 and 2 send the same messages to the referee as in Lemma 4.5. Player 3 sends the intersection of C_s with the set of neighbors of i in the graph H . This is a set of size $O(n)$, so it can be coded by $O(n)$ bits.

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