

In Axiom system 2 we have at least four members and at least two committees.

Proof:

By A3 there is at least one committee, say C_1 .

By A4 there must be at least three members, say m_1, m_2, m_3 .

But, by A5 not all members are on the same committee. Hence, there must be a fourth member, m_4 , not on C_1 . By A1 there must be a committee, say C_2 , containing m_4 and m_1 . Hence, we must have at least four members and two committees.