

# Pi Mu Epsilon

## Problem of the Month

### September 2017

Six people (A, B, C, D, E, F) know six distinct parts of a secret code. By the end of a phone call between two people, both people will have all information about the secret code that each individual person had at the start of the conversation. Because of their paranoia, none of the people will participate in a conference call; only phone calls with two participants can occur. Determine the minimum number of phone calls it would take for every person to know the entire code.

Problem of the Month Rules:

- ⌘ Submissions must include a complete mathematical justification along with the answer.
- ⌘ Submissions may only be made by individuals or groups of two and must be dated.
- ⌘ Due date: September 27, 2017 before 5 p.m.; they may be given to Dr. Phillip Poplin or Dr. David Shoenthal.

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