

PTP 4: The Jacobean Locks Problem

- In medieval times, the inhabitants of a remote village decided to put a number of locks on a giant chest to protect the village valuables from marauding thieves.
- For additional security, the villagers created a enough locks and keys so that no two people from the village had enough keys to open the chest, but amongst them any group of three people always had enough keys to open all the locks on the chest.

Under Lock and Key

The problem:

How many locks, and how many keys, are needed to insure that no two people can open the chest, but any three people can?