# Group Axioms - Solitaire and the Klein 4 group

**Activity**

- Bring with you to class: pennies (to serve as marbles).

- It is helpful to introduce students to the Klein-4 group before doing this activity. See the Symmetries and Dance Module for possible activities.

- Distribute Axioms of Groups handout and have students read it quietly. Ask each table to share with each other anything that doesn't make sense and they'd like explained; they should try and answer each other's questions. Then ask each table to formulate one outstanding question.

- Then distribute the Solitaire worksheet and have students work through it in their groups.

**Assignments**

Journal Question: *Most mathematicians prove theorems, great mathematics make enduring conjectures, to make enduring definitions takes real genius.* What makes a good definition?

**References and resources**

Blog Post: The Power of Groups

Group Axioms Handout

Solitaire Handout

Article: Group Think

**Follow-on activities**

Square Mattress and Change Ringing