

# Building Bridges

NAME \_\_\_\_\_

Write equations to solve the problems below.

1. The girls in your school play a one-on-one basketball tournament in which every girl plays every other girl exactly once.

Find a way to determine the number of games to be played when various numbers of girls register for the tournament.

2. To raise money for a school concert, Becky suggests the following idea: On the first day, Becky invites two friends for lemonade and cookies. Each friend pays  $25\phi$ . On the second day, each of Becky's two friends invites two more friends for lemonade and cookies at the same cost. On the third day, each of the four new friends from the second day invites two friends, and so the process goes on.

Find a way to determine the number of friends invited to lemonade and cookies on different days. Also find a way to determine the total amount of money raised after the process has continued for various numbers of days.