Friendly Factors

2 players

Using factors to multiply whole numbers

Purpose

This game gives the students practice multiplying two-digit numbers by a one-digit multiplier. The two-digit numbers are suitable for breaking into factors, for example, 3 x 24 is the same as 3 x 3 x 8. 'Factor Find' described on pages 28-31 is the prerequisite for this game.

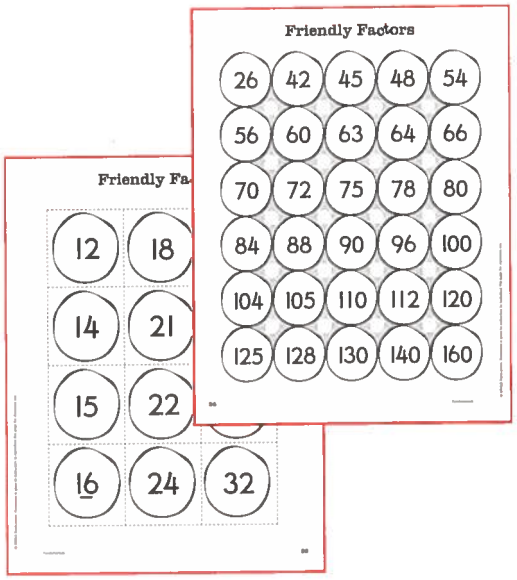
Materials

Each pair of players will need

- A 'Friendly Factors' game board (page 38) as shown below.
- One (1) set of numeral tokens. Copy page 39 as shown below. Cut out and laminate the tokens to make one set.
- One (1) number cube showing the numerals 3, 3, 4, 4, 5, and 5. This can be made from a blank wooden cube.

Each player will need

- Fifteen (15) counters (a different color for each player).



How to Play

The aim is to place as many counters on the game board as possible.

- The tokens are placed face up beside the game board.
- The first player selects a token and then rolls the number cube.
- The player mentally calculates the product of the two numbers and claims the answer on the game board by covering it with a counter. If an answer is unavailable, the player misses a turn. A calculator can be used if an answer is disputed.
- The token is returned.
- The other player has a turn.
- The player with the greater number of counters on the game board after ten rounds is the winner. Players can use tallies to record the number of rounds.

Reading the Research

Research shows that those who are skilled in mental computation use a variety of strategies, involving primarily different forms of distributivity and factoring. They avoid 'carrying', frequently work from left to right, and reduce the demands on their memory by making interim calculations (Sowder, 1992).