First to Forty

2 players

Reinforcing the make-a-ten strategy

Purpose

This game is designed to help students to see ten as one ten as well as ten ones. This realization will encourage students to move beyond count-all strategies to more efficient strategies, such as bridging to ten to solve addition and subtraction problems. For example, a student who bridges to ten to solve 7 + 5 would think 7 + 3 = 10 and 10 + 2 = 12. Although this game involves the addition of one- and two-digit addends, the students will also be using the thinking associated with missing-addend subtraction, for example, *I have 19. How many more do I need to make 40?*

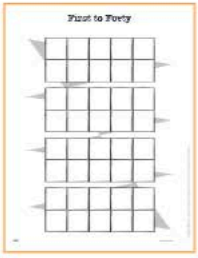
Materials

Each pair of players will need

- One (1) standard number cube showing numerals or dot patterns 1-6.

Each player will need

- A 'First to Forty' game board (page 54) as shown below.
- Forty (40) counters (a different color for each player).



How to Play

The aim is to fill four ten-frames with counters.

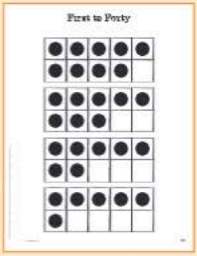
- Players must start at the top row and fill from left to right in each ten-frame.
- The first player rolls the number cube.
- The player then places that number of counters in the first ten-frame on his or her game board.
- The other player has a turn.
- The first player to fill all of his or her ten-frames is the winner. It is not necessary to roll an exact number to finish.

Reading the Research

Ten-frames are good for developing part-whole understandings involving the landmark numbers 5 and 10. These understandings are especially useful in addition- and subtraction-fact work (Isaacs & Carroll, 1999; Van de Walle, 2001).

Before the Game

Copy page 55 as shown (right). Cut out and laminate each ten-frame to make a set of flash cards. Flash the first ten-frame for about a second. Ask, ***How many dots are in the frame? How many more are needed to make 10? How many more would be needed to make 12 ...13 ...14?*** Elicit the correct response and invite the students to explain how they know. Repeat this line of questioning as you show each of the other three ten-frames. Explain the rules of 'First to Forty' using an overhead transparency of the game board.



During the Game

Introduce a new rule. Tell the students that at any given time you may ask, ***What is your total?*** and ***How many more do you need to make 40?*** The student misses a turn if he or she cannot answer quickly. This gives you the opportunity for on-the-spot observational assessment. Look for students who count each individual square to figure out how many. These students may not yet see ten as a countable unit. Two students who had a total of 21 gave the following responses:

Marcus: *I need 19 more because I need 9 more to make 30 and another 10 to make 40.*

Micala: *I know 20 plus 20 is 40 but I have 21, so I must need 19.*

After the Game

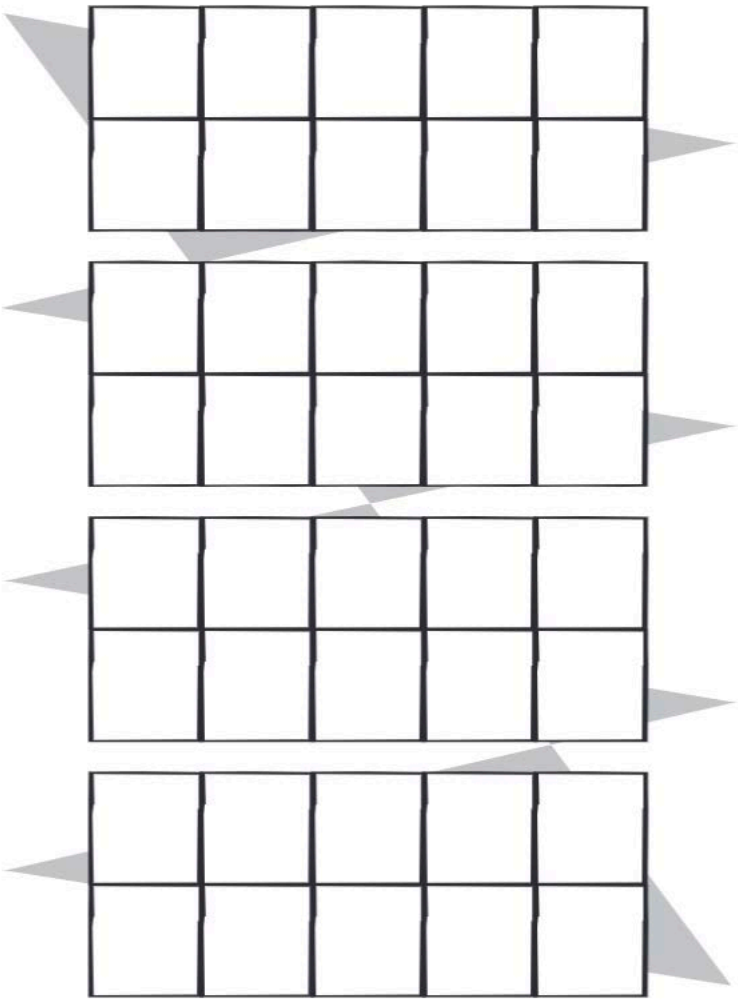
Use an overhead transparency of the game board. Place twenty-seven counters in the top three ten-frames. Ask, ***I have 27 counters. What will be my total if I roll 6?*** Use counters of a different color to show that one strategy is to partition 6 into 3 + 3. Add 3 counters to 27 to make 30 and add another 3 to make 33.

Encourage students to think beyond 40. Ask, ***Suppose I was playing 'First to Sixty'. What would the game board look like?*** (Six ten-frames.) ***How would you show a total of 46?*** (Four full ten-frames and six in the next one.) ***How many more would I need to make 60? How do you know?***

Beyond the Game

- Play a subtraction version of the game. Students start by filling the four ten-frames with forty counters. The number they roll must be subtracted from the total. For example, if the first number rolled is 4, four counters must be subtracted from the bottom right of the last ten-frame leaving 3 full ten-frames and 6 (36). The first player to reach zero wins.
- Play the addition or subtraction version of the game using a ten-sided die showing numerals 0-9.

First to Forty



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