How Much More?

2 players

Finding the difference

Purpose

In this game, students find the difference between two numbers less than seven. Manipulatives are used to help students see that the difference can be calculated by taking away the part that is the same.

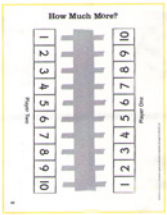
Materials

Each pair of players will need

- A 'How Much More?' game board (page 30) as shown below.
- Forty (40) linking cubes.

Each player will need

- One (1) standard, number cube showing dot patterns 1-6 (one color for each player).



How to Play

The aim is to collect ten linking cubes.

- Simultaneously, the players roll their number cubes.
- The player with the greater number calculates the difference between the two numbers rolled. If both players roll the same number, the difference is zero and the players roll again.

  Example: Donald rolls 6 and Emma rolls 3. Donald calculates a difference of 3 and says, I have 3 more.

- The players check the difference by making a train of linking cubes to match each number rolled.
- The players place the trains side-by-side and the difference is again stated. If the player with the greater number is correct, he or she collects the difference and places these linking cubes on his or her side of the game board. If the player calculates incorrectly, the other player collects the difference.

  Example: Donald makes a train of six linking cubes and Emma makes a train of three linking cubes. Donald states the difference again. As he is correct, he removes the difference (three cubes) and places them on his side of the game board.

- The first player to collect ten linking cubes is the winner.

Reading the Research

Children who use hands-on materials when learning mathematics generally achieve greater results than those who do not (Sowell, 1989; Suydam, 1986).

Before the Game

Before introducing the game, lead a discussion to compare two numbers. For example, write 6 and 4 on the board and ask, ***What do you know about these numbers? How are they the same? How are they different?*** If students say that one number is bigger than the other, ask, ***How much bigger?***

Invite two students to play the game on the floor. The remainder of the class can sit or stand in a circle around the players and watch the game.

During the Game

Ask students to explain their mental computation strategies. Are they counting up from the smaller number or counting down from the larger number? Some students may be using other strategies, such as using doubles or near doubles.

Refer to the game board and ask questions such as, ***How many more cubes do you need to make 10? How many more (or less) do you have than your opponent?***

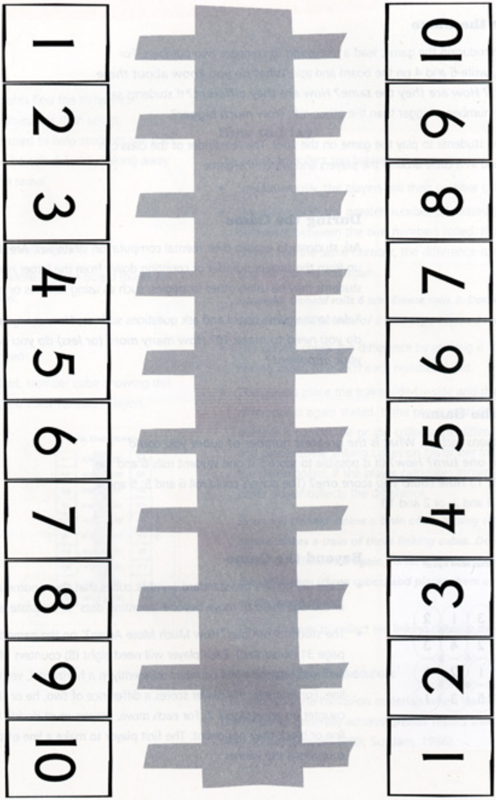
After the Game

Ask questions such as, ***What is the greatest number of cubes you could collect in one turn? How?*** (It is possible to score 5 if one student rolls 6 and the other rolls 1.) ***How could you score one?*** (The players could roll 6 and 5, 5 and 4, 4 and 3, 3 and 2, or 2 and 1.)

Beyond the Game

- Have the players use standard number cubes that show numerals 1-6. This will encourage them to move beyond 'counting dots' to calculate each difference.
- The students can play 'How Much More Again?' on the game board shown on page 31 (illustrated). Each player will need eight (8) counters of one color. The aim is to arrange three counters adjacently in a horizontal, vertical, or diagonal line. For example, if a player scores a difference of two, he or she places one counter on an available 2. For each move, players must decide to build a line or block their opponent. The first player to make a line of three adjacent counters is the winner.

How Much More?



How Much More Again?