



Multiplication Pathways

Game 31 from *Math Fact Fluency*

Math Fact Fluency Background:

- Purpose: foundational multiplication facts strategy game
- The equal groups meaning of multiplication must remain at the forefront of the strategy work.
- Multiplication representations showing equal groups or arrays can be helpful for keeping track of steps.
- The key is to make practice through games as meaningful and strategy focused as possible.

About Games and Math Fact Fluency:

Games are fun. But, more importantly, games are effective ways to support *learning*. Games provide opportunities for:

- low-stress practice of (1) facts and (2) strategies (both outcomes are critical to math beyond the basic facts!).
- think aloud, an effective learning strategy. Therefore, students should develop the habit of verbalizing their mathematical thinking out loud.
- student listening and learning from peers. Therefore, discussing strategies before and after playing allows students opportunities to learn from each other.
- teachers to formatively assess and plan instruction. Therefore, at times, use an observation tool to record how students are progressing.

Effective math fact fluency games remove time pressure and allow students time to think. That means no time component. **Each** player has their own cards or dice to roll, so they are not racing each other. Scoring is de-emphasized. **Thinking strategies are front and center.**

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2 players

Materials: two paper clips or clear counters, pencil, dry erase marker, laminated 4 x 6 game board with foundational fact products in squares



S	0	40	20	3	2	5	F I N I S H
T	8	10	5	30	0	10	
A	5	20	8	50	6	20	
R	10	4	0	10	30	12	
T	0 1 2 3 4 5 6 10						



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How to Play:

1. Players place paper clips on two different numbers at the bottom of the board to make a product in the first column.
2. Players mark that square with an "x" on the game board.
3. Player 1 decides which of the two clips to move to form the product directly to the right of the marked square, either horizontally or diagonally. Remember, you may only move 1 paper clip.
4. Players must go back to start and try again if a product cannot form from any given move.

Game in Action: Players take turns placing clips, trying to make a product, and marking that box on their game board until a player reaches "Finish".

For example: Player 1 places paper clip on 2 and 5, marks an "X" on that product on their score card, and reaches the FINISH line.

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T							

Scorecard

Player 1
$1 \times 5 = 5$
$2 \times 4 = 8$
$2 \times 3 = 6$

Player 2
$5 \times 4 = 20$
$2 \times 5 = 10$
$2 \times 5 = 10$



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Possible Variations:

1. Factors at the bottom on the board and products in the squares can be changed.
2. Pair students into teams and play two teams per game board.
3. To practice multiplication square products, allow students to place both clips on the same number.