



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.**

Multiplication Pathways

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



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How to Play:

1. Player 1 picks two different numbers at the bottom of the shared gameboard to make a product in the first column and places counters or paper clips on those two numbers.
2. Player 1 marks that product in the first column with an "x" on the gameboard and records the multiplication problem on the scorecard.
3. Player 2 decides which of the two counters/paper clips to move to form a product either horizontally or diagonally in the 2nd column, and records that multiplication problem on the scorecard.
4. Each player may only move 1 counter/paper clip per turn.
5. Both players continue taking turns as they move across the board. If a product in the next column cannot be formed, both players go back to the start and try again to make it to the finish line.

Game in Action: In the example below, players take turns moving the paper clips, trying to make a product, and marking that box on the game board until they reach the Finish line.

For example: On their 3rd turn, Player 2 moves the paper clip from 3 to 5, records $2 \times 5 = 10$ on their scorecard, marks an X through 10 in the last column, and reaches the FINISH line.

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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.

