

Tic-Tac-Toe Array

Building Fluency: products of whole numbers and their relationship to rectangular arrays

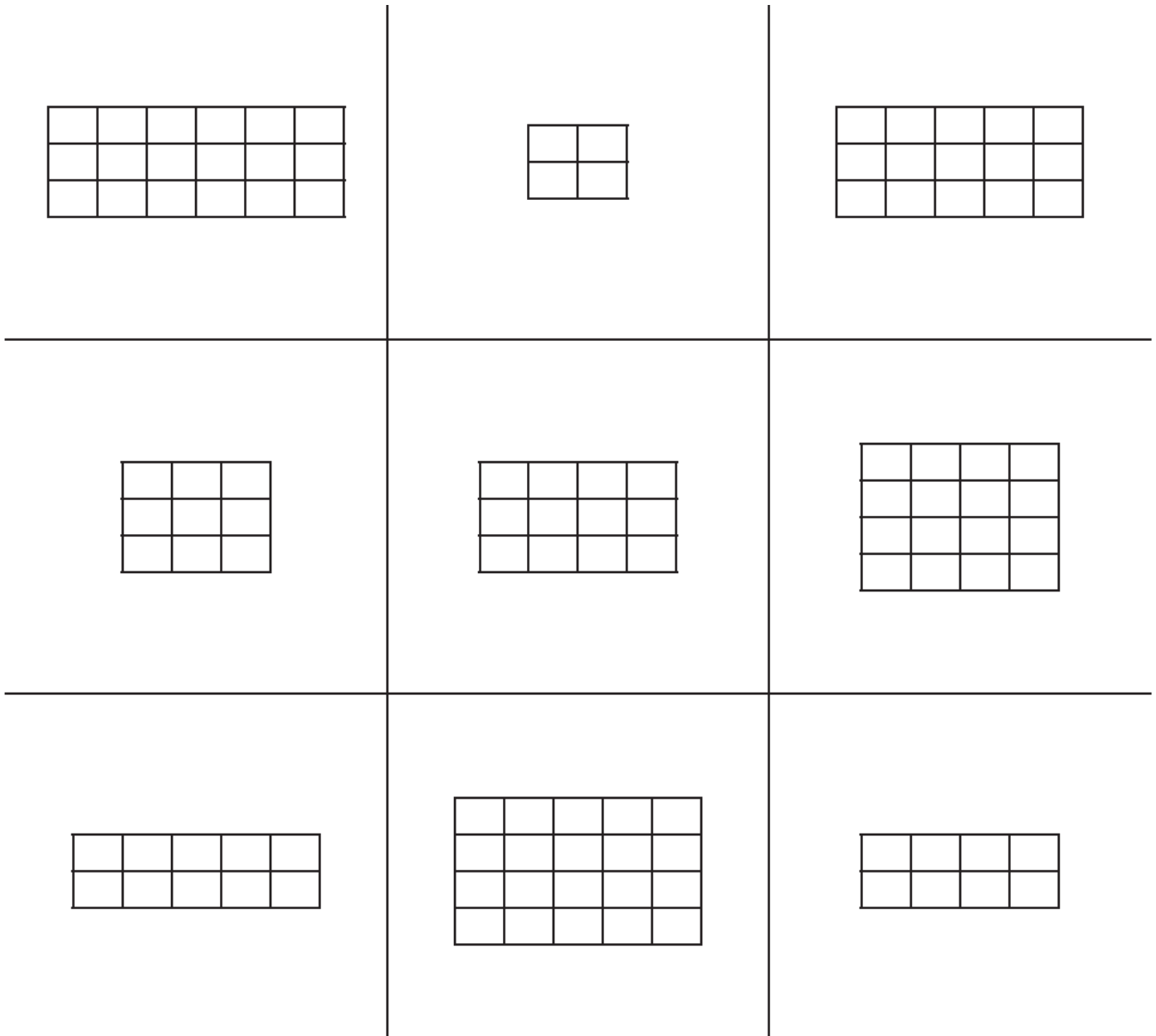
Materials: gameboard, pile of centimeter cubes (at least 20), 5 game markers - different color for each player, a spinner (your choice)

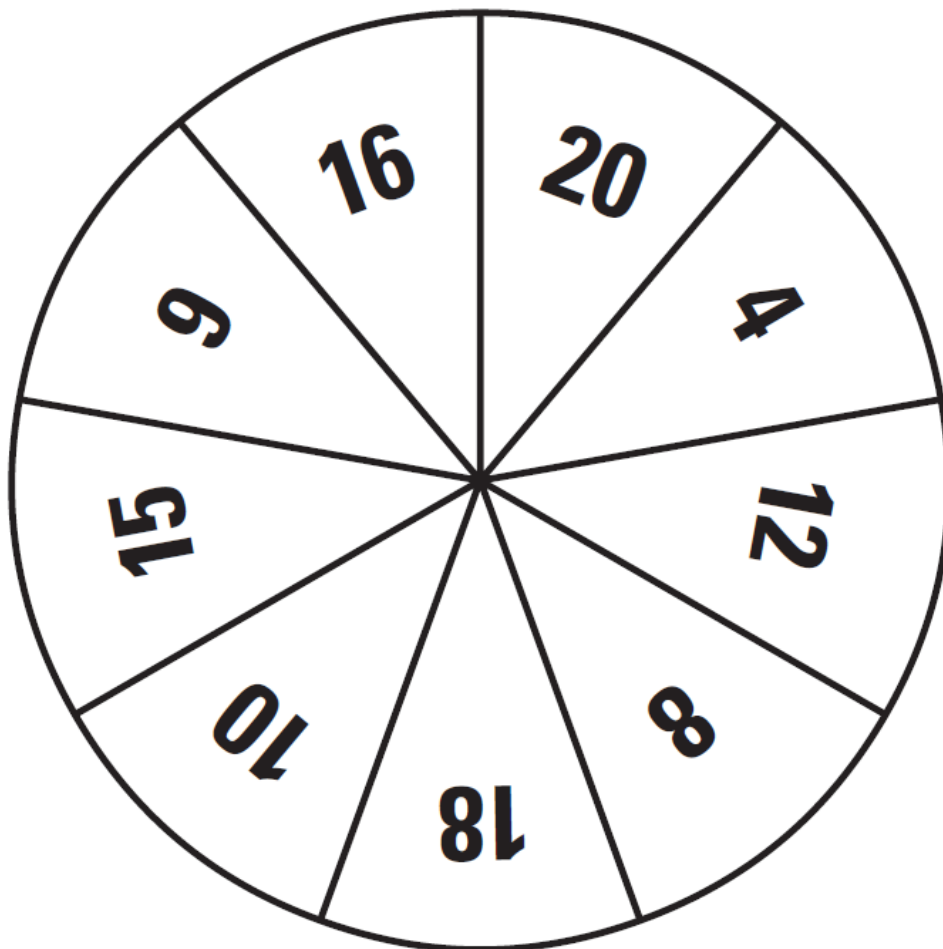
Number of Players: 2

Directions:

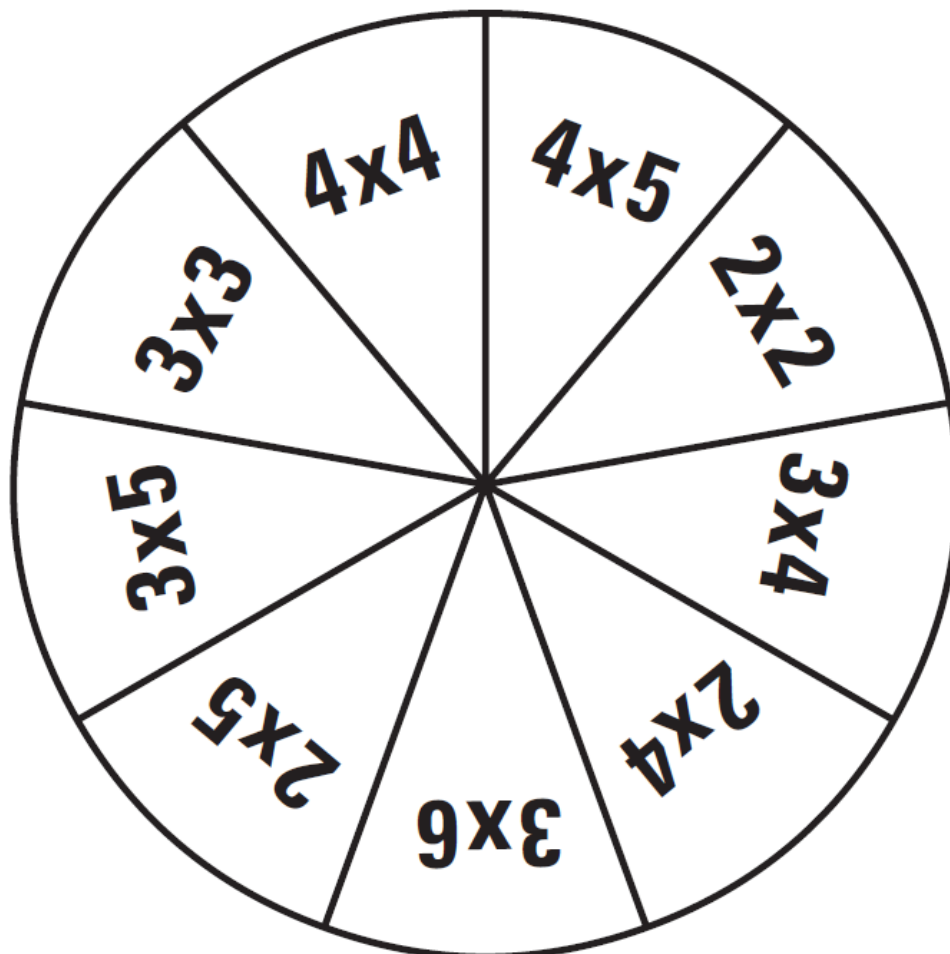
1. Players take turns spinning the spinner. The player takes the number of cubes shown on the spinner.
2. The player uses the cubes to build one of the rectangles shown on the gameboard & says the equation used to build the rectangle.
3. The player puts the cubes back in the pile and places a marker on the rectangle.
4. The winner is the first player to have three markers in a row.

Variation/Extension: Player may win by being the first to cover four adjacent rectangles to form a box. Use the second spinner. Player will multiply and use those dimensions to make the rectangle.





Variation #2
Spinner



Raging Rectangles

Building Fluency: products of whole numbers and their relationship to rectangular arrays; relate area to operations of multiplication

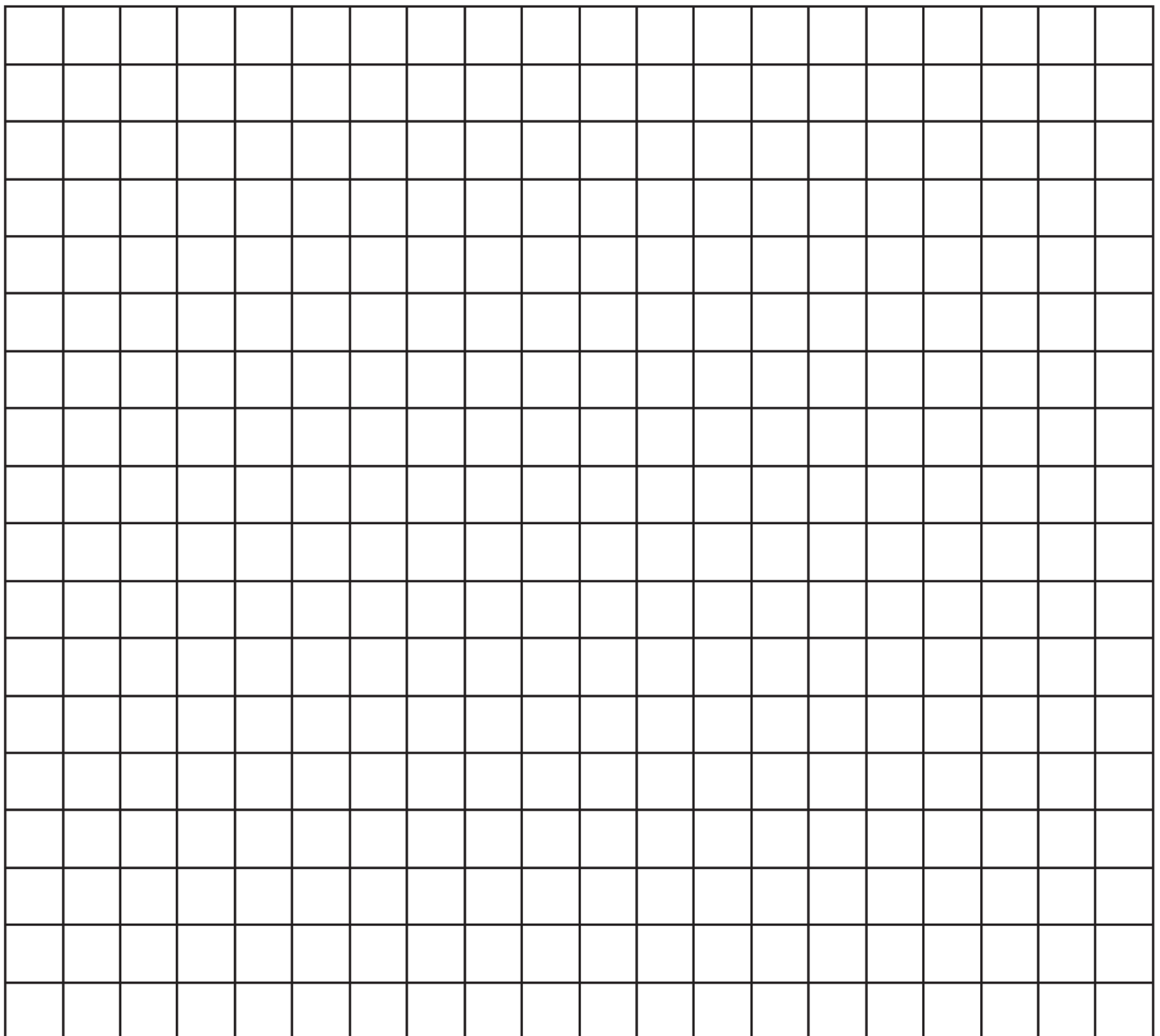
Materials: gameboard, pair of dice, 1 crayon - different color per player

Number of Players: 2

Directions:

1. Each player takes a turn rolling the dice to get two factors.
2. The player outlines and colors a rectangle on the gameboard to match the pair of factors. Example: a roll of 6 and 3 is colored as a 6 x 3 rectangle or a 3 x 6 rectangle.
3. The player writes the equation (area) inside the rectangle.
4. A player loses a turn when the rectangle cannot be drawn on the gameboard.
5. The winner is the player with the most area colored.

Variation/Extension: Students can add the two numbers on the dice for the first factor and then use 2, 5 or 10 as the second factor.



No Leftovers Wanted!

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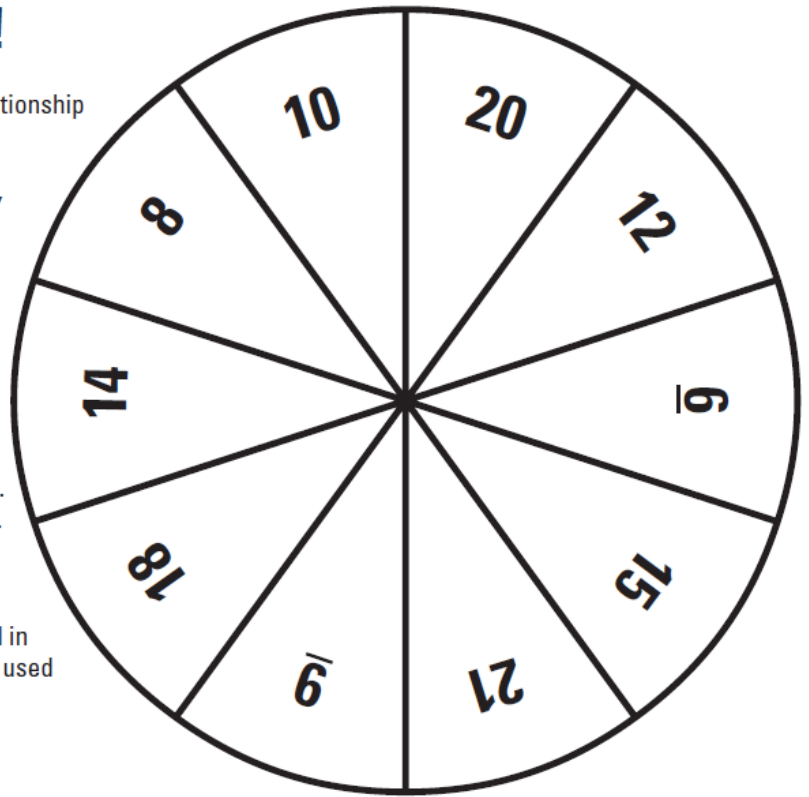
Materials: gameboard, a die, spinner (pencil and paperclip), 21 color tiles, cubes, or counters

Number of Players: 2

Directions:

1. Player spins the spinner and takes that number of counters.
2. Player rolls the die to see how many equal rows will be in the array. Then the player builds the array.
3. The number of counters in one row is the player's score. The player's score is doubled if there are no leftovers.
4. Players record their score after each turn.
5. The winner has the highest score after six rounds.

Variation/Extension: Use the area or number of blocks used in the array to be the score. Use the area or number of blocks used in the array minus the leftovers to be the score.



PLAYER 1

| Turn | # of Counters | # of Equal Rows | # in Each Row | # of Leftovers | Score |
|------|---------------|-----------------|---------------|----------------|-------|
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |

PLAYER 2

| Turn | # of Counters | # of Equal Rows | # in Each Row | # of Leftovers | Score |
|------|---------------|-----------------|---------------|----------------|-------|
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |