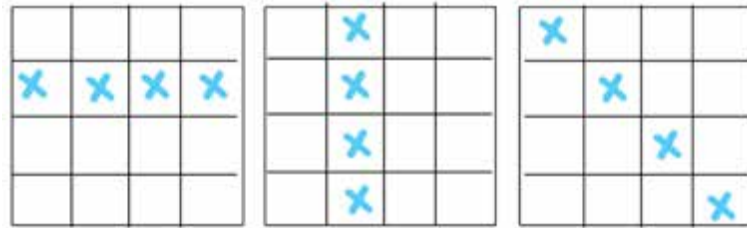


Two-Digit Multiplication 4-in-a-Row

Object of the Game

Be the first player to claim 4 spaces in a row, column, or on the diagonal to win the game.



Three ways to win!

Materials

- A deck of Number Cards containing 2 each of the numbers 1–6
[Print the Number Cards](#) 🖨️, make your own cards, or use the 2–6 cards and aces for 1s from a deck of playing cards.
- 2 Multiplication 4-in-a-Row game boards (1 for each player)
[Print the Two-Digit Multiplication 4-in-a-Row game board](#) 🖨️ or use paper and pencil to make your own.
- 32 game markers (16 for each player). These can be dried beans, buttons, coins, paper scraps, building blocks, etc.
- Scrap paper for solving problems
- Pencil or pen



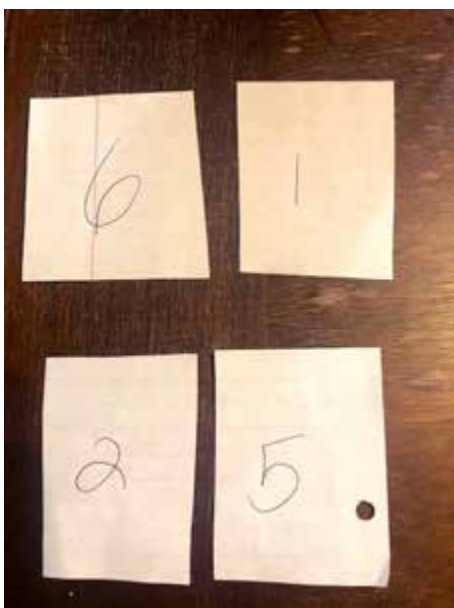
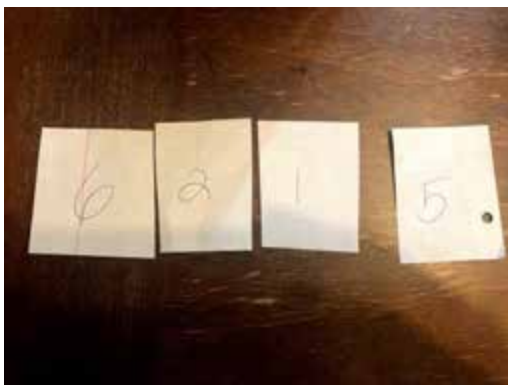
Skills

This game helps us practice

- Multiplying two 2-digit numbers
- Estimating products

How to Play

1. Print or make game boards. If making your own, copy the text from the printable game board to your homemade one. *Hint: You can quickly make a 4 by 4 grid by folding a piece of paper in half twice horizontally, then twice vertically.*
2. Mix up the Number Cards and place them facedown in a stack. Decide who will go first.
3. Player 1 draws four Number Cards and makes two 2-digit factors to multiply.



4. Both players write the expression on a piece of paper, find the product, and mark a corresponding space on their game boards.

Handwritten calculation showing the multiplication of 61 by 25 using the distributive property:

$$\begin{array}{r} 20 \times 40 = 1200 \\ 5 \times 40 = 300 \\ 20 \times 5 = 20 \\ 5 \times 5 = 25 \\ \hline 1200 + 300 + 20 + 5 = 1525 \\ \hline 1500 + 25 \end{array}$$

- If a player does not have a corresponding space, they don't get to mark a space on that turn.
- Some products will fit more than one description on the game board. Players might want to arrange the Number Cards to find products that strategically match open spaces on their own board, but not the other player's board.
- The letter P represents the product (result of multiplying 2 or more numbers) so $P < 150$ means a product that is less than 150.)

$P < 7200$	$P < 150$	$100 < P < 200$	$P < 800$
$1000 < P < 2,000$ $61 \times 25 = 1525$	$P > 500$	$250 < P < 500$	$P > 800$
$P < 400$	$P > 600$	$400 < P < 600$	$P > 1,000$
$P < 250$	$700 < P < 800$	$600 < P < 800$	$P > 2,000$

5. Replace the cards and shuffle the deck.
6. Player 2 draws 4 Number Cards and makes 2 factors to multiply. Both players write the expression, find the product, and claim a space on their game boards.
7. Players keep taking turns until one claims 4 spaces in a row, column, or diagonally to win the game.
8. Have fun!

Tips for Families

- As you play, talk about how you are choosing which spaces to claim.
- Encourage your child to explain the strategies they are using to multiply. They may be ones you are unfamiliar with. Ask questions if you don't understand. It's always interesting to learn something new!

Change It Up

Making even small changes to a game can invite new ways of thinking about the math. Try making one of the changes below. How did it change your strategy for winning the game?

- Add 4 Wild Cards to your deck of Number Cards, or 4 Jokers if using regular playing cards. When a player draws a Wild Card, each player can assign a number of their choosing to the card.
- Change the winning requirement to claiming 2 sets of 4 in a row, or claiming all of the spaces.
- Draw 1 extra card. After Player 1 makes the two numbers, Player 2 can swap out one of the digits with the extra card.



1	2	3
4	5	6
1	2	3
4	5	6

Multiplication 4-in-a-Row

$P > 200$	$P < 150$	$100 < P < 200$	$P < 800$
$1,000 < P < 2,000$	$P > 500$	$250 < P < 500$	$P > 800$
$P < 400$	$P > 600$	$400 < P < 600$	$P > 1,000$
$P < 250$	$700 < P < 800$	$600 < P < 800$	$P > 2,000$