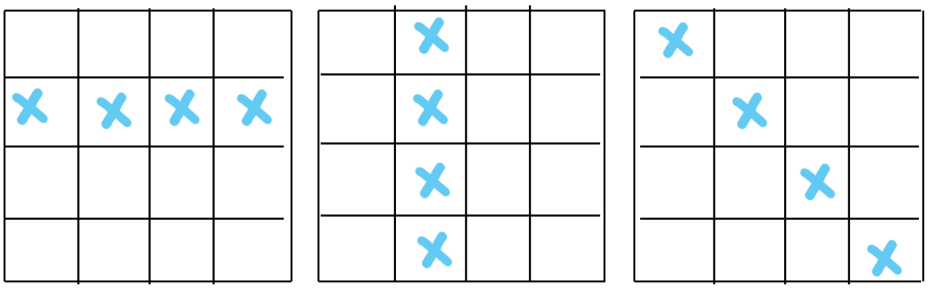
Two-Digit Multiplication 4-in-a-Row

Object of the Game

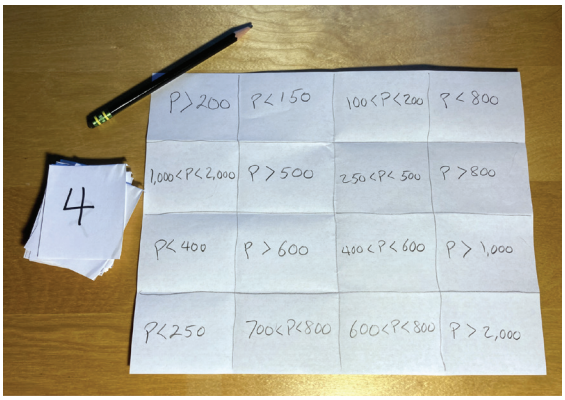
Be the first player to claim four spaces in a row, column, or on the diagonal to win the game.



Three ways to win!

Materials

- A set of Number Cards
(two each of the numbers 1–6)
Print the cards, make your own, or use the 2–6 cards and aces for 1s from a deck of standard playing cards.
- 2 Two-Digit Multiplication 4-in-a-Row game boards (1 for each player)
Print the game boards or 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:

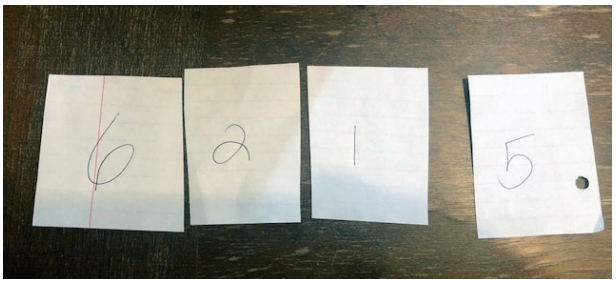
- Multiplying two 2-digit numbers
- Estimating products

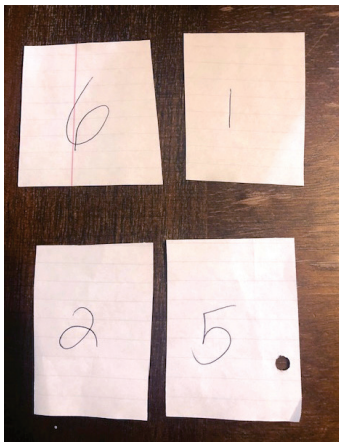
How to Play

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 face-down in a stack. Decide who will go first.

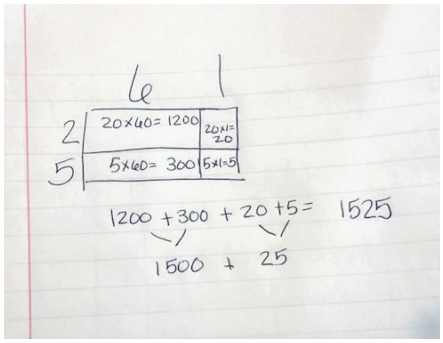
3. Player 1 draws four cards and makes two 2-digit factors to multiply.

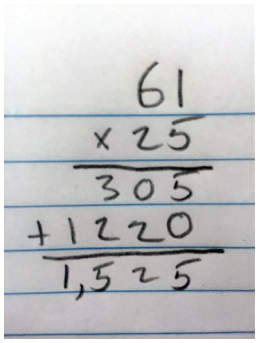




4. Both players write the expression on a piece of paper, find the product, and mark a corresponding space on their own game boards.

   » If players arrive at different products, they should work together to come to an agreement about the correct answer.





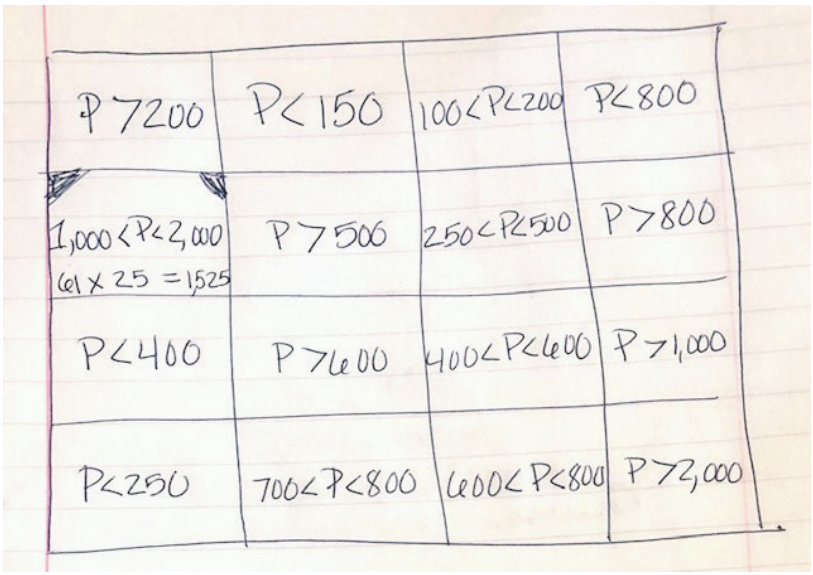
   Use partial products, the standard algorithm, or another appropriate strategy to multiply the numbers.

   » 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 two or more numbers) so P < 150 means a product that is less than 150.



5. Place the cards from this turn in a discard pile.
6. Player 2 draws four cards and makes two 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 four spaces in a row, column, or diagonally to win the game.
    » If players run out of cards, they should shuffle the cards in the discard pile and use them again.
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!
- Your child is just learning about the standard algorithm for multiplication, which is the way most adults multiply multi-digit numbers. They may have questions you can answer about how to use this strategy.

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 four Wild Cards to your set of number cards, or 4 Kings if using standard 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 two sets of four in a row, or claiming all of the spaces.
- Draw one extra card. After Player 1 makes the two numbers, Player 2 can swap out one of the digits with the extra card.
- Use the Challenge game board and number cards from 4–9 for a game with larger products.

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

7	8	9
7	8	9
Wild Card	Wild Card	Wild Card
Wild Card		

Two-Digit 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

Two-Digit Multiplication 4-in-a-Row — Challenge

For use with number cards 4–9

$P < 2{,}000$	$P > 2{,}000$	$P > 3{,}000$	$5{,}000 < P < 6{,}000$
$P < 5{,}000$	$3{,}000 < P < 4{,}000$	$6{,}000 < P < 7{,}000$	$P > 6{,}000$
$P < 4{,}000$	$P > 5{,}000$	$3{,}000 < P < 4{,}000$	$P < 4{,}500$
$4{,}000 < P < 5{,}000$	$P > 2{,}500$	$P < 6{,}000$	$P > 7{,}000$