

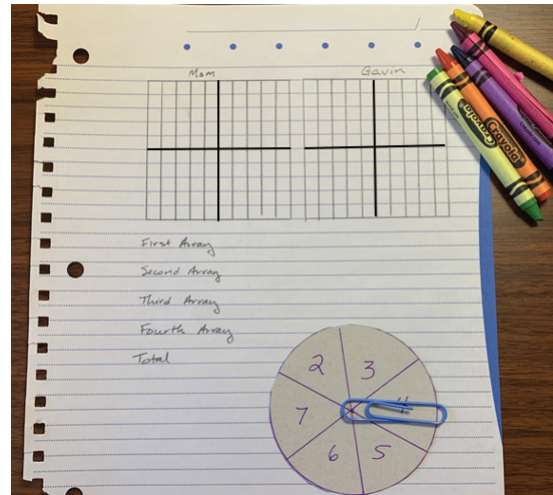
# Cover Up

## Object of the Game

Players take turns spinning two numbers, drawing a rectangle (or array of grid squares) with those dimensions, and finding the product represented by the array. Each player takes four turns and then finds the sum (total) of their products. The player whose sum is closer to 100 wins.

## Materials

- Number Spinner 2–7  
Print the spinner, use an online spinner like the one at [www.nctm.org/adjustablespinner](http://www.nctm.org/adjustablespinner), or make your own spinner with numbers 2–7. See instructions for making a spinner at [www.mathlearningcenter.org/sites/default/files/pdfs/home-learning/family-games/MakeYourOwnSpinner.pdf](http://www.mathlearningcenter.org/sites/default/files/pdfs/home-learning/family-games/MakeYourOwnSpinner.pdf).
- Pencil and paper clip or safety pin for the spinner
- Cover Up Record Sheet  
Print the record sheet or make your own. For the grid portion, you can use graph paper, try the preset grid in the free Number Pieces app at [apps.mathlearningcenter.org/number-pieces/?1yr4451j](http://apps.mathlearningcenter.org/number-pieces/?1yr4451j), or make your own grid.
- colored pencils or crayons in several colors



## Skills

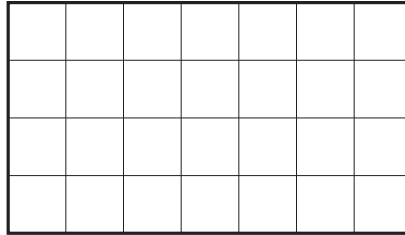
This game helps us practice:

- Multiplying 1-digit numbers
- Drawing arrays to represent products
- Adding 2-digit numbers
- Subtracting numbers from 100

## How to Play

1. Players take turns spinning the spinner. The player who spins the greater number is Player 1 and goes first.

2. Player 1 spins the spinner twice and records the two numbers on the Cover Up Record Sheet.
3. Then they draw an array with dimensions of the two numbers they spun.
  - » Reminder: An array is an arrangement with equal rows and equal columns. The example array below has 4 rows and 7 columns.



$$4 \times 7 = 28$$

4. Player 1 records the product of the array.
  - » If the player spins a 4 and a 7, they multiply  $4 \times 7$ . The answer or product is 28.
5. Player 2 takes a turn spinning and recording the numbers, drawing an array, and recording the product.
6. Players continue taking turns until each person has had 4 turns.
  - » If there is not enough room on the grid to draw an array, the player loses their turn.
7. Each player adds their four products together. The player who is closer to 100 wins.

	Mom	Gavin
First Array	$2 \times 7 = 14$	$5 \times 6 = 30$
Second Array	$7 \times 4 = 28$	$2 \times 4 = 8$
Third Array	$5 \times 6 = 30$	$3 \times 5 = 15$
Fourth Array	<del><math>6 \times 7</math></del>	$7 \times 3 = 21$
Total	72	74

Mom didn't have enough room to draw her fourth array. She added her 3 products. ( $14 + 28 + 30 = 72$ )  
Her score was 72.

Gavin added his 4 products. ( $30 + 8 + 15 + 21 = 74$ ) Gavin's score was 74.

Gavin's score was closer to 100, so he won.

## Tips for Families

- Before you play, talk about arrays. What strategy could you use so that you don't lose a turn?
- Talk about ways to multiply. How does making an array make it easier to find a product? How can the bold lines on the grid help you?
- How many grid squares are there in all? How can this help you determine the winner?

## Change It Up

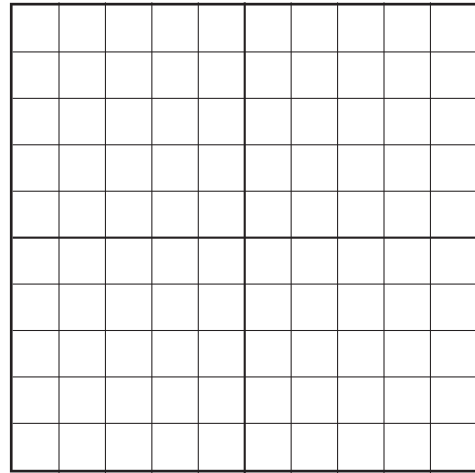
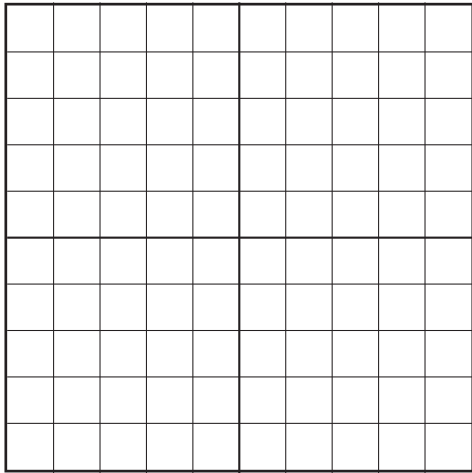
Making even small changes to a game can invite new ways of thinking about the math. Try making one of the changes below. How did it change your strategy for winning the game?

- Change one space on the spinner to be wild. When you land on this space, you get to choose any number for one of the dimensions. How will this change your strategy?
- Make a larger grid by putting two grids together. The larger grid is 20 squares by 10 squares. Play 8 rounds. The player who has a sum closer to 200 is the winner.
- Change the 3 on the spinner to 8. Use a double-sized grid.

# Cover Up Record Sheet

Player 1 \_\_\_\_\_

Player 2 \_\_\_\_\_



First Array \_\_\_\_\_

First Array \_\_\_\_\_

Second Array \_\_\_\_\_

Second Array \_\_\_\_\_

Third Array \_\_\_\_\_

Third Array \_\_\_\_\_

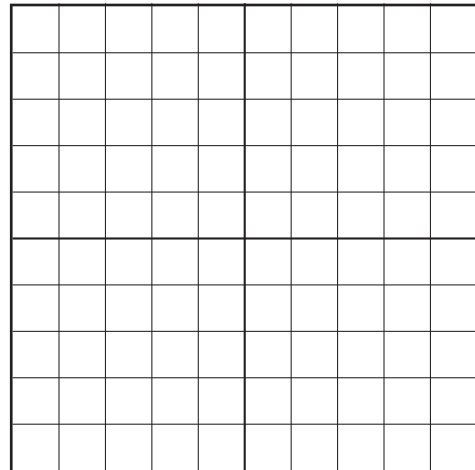
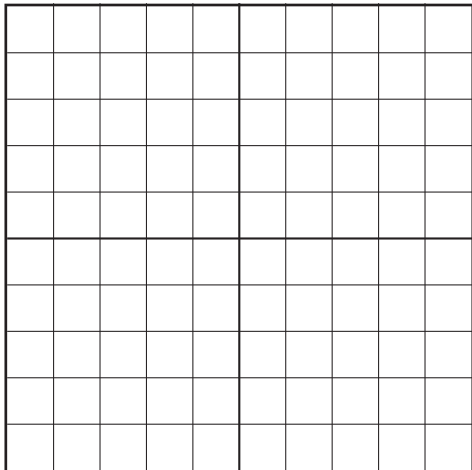
Fourth Array \_\_\_\_\_

Fourth Array \_\_\_\_\_



Player 1 \_\_\_\_\_

Player 2 \_\_\_\_\_



First Array \_\_\_\_\_

First Array \_\_\_\_\_

Second Array \_\_\_\_\_

Second Array \_\_\_\_\_

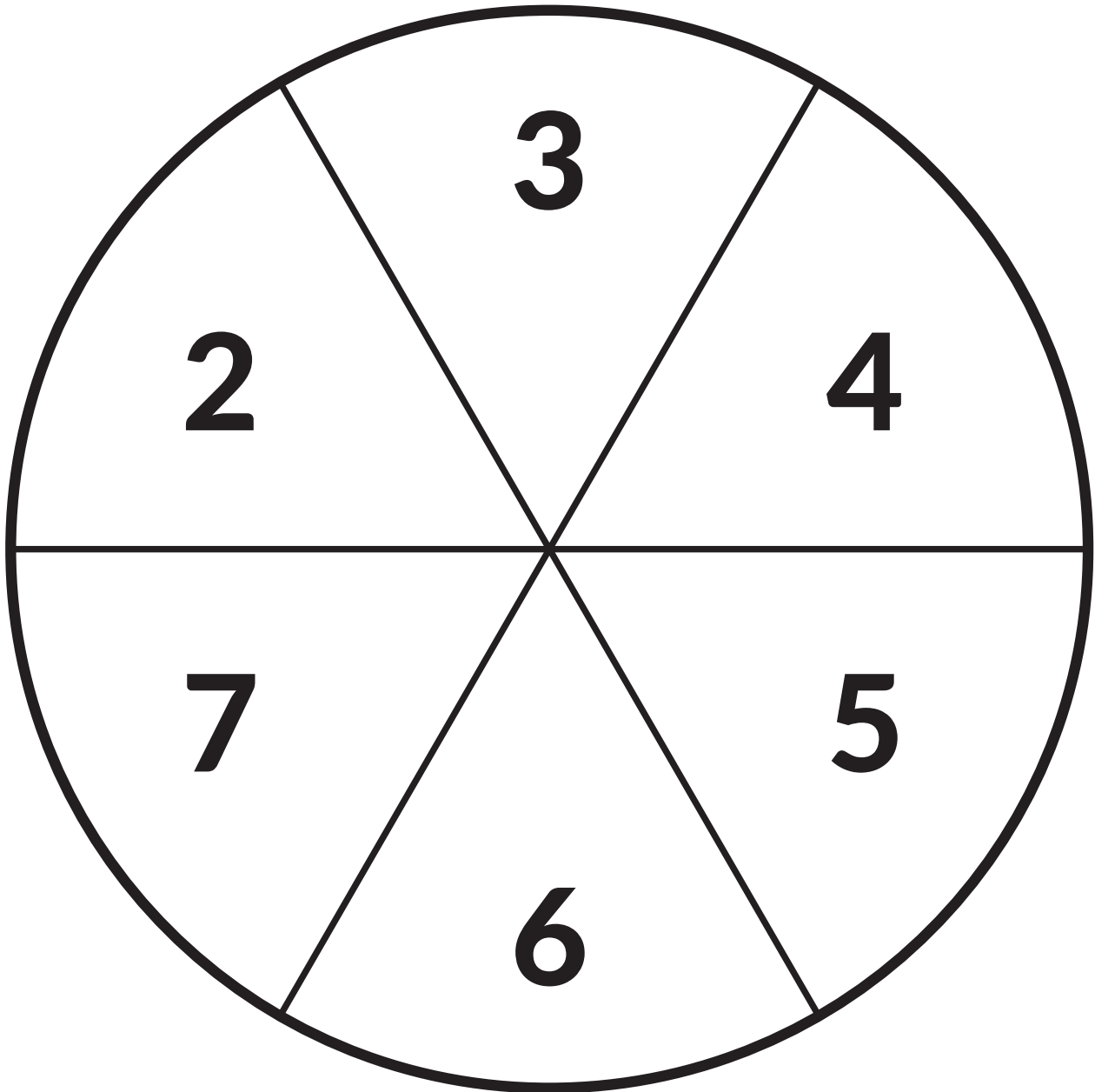
Third Array \_\_\_\_\_

Third Array \_\_\_\_\_

Fourth Array \_\_\_\_\_

Fourth Array \_\_\_\_\_

# Number Spinner 2-7



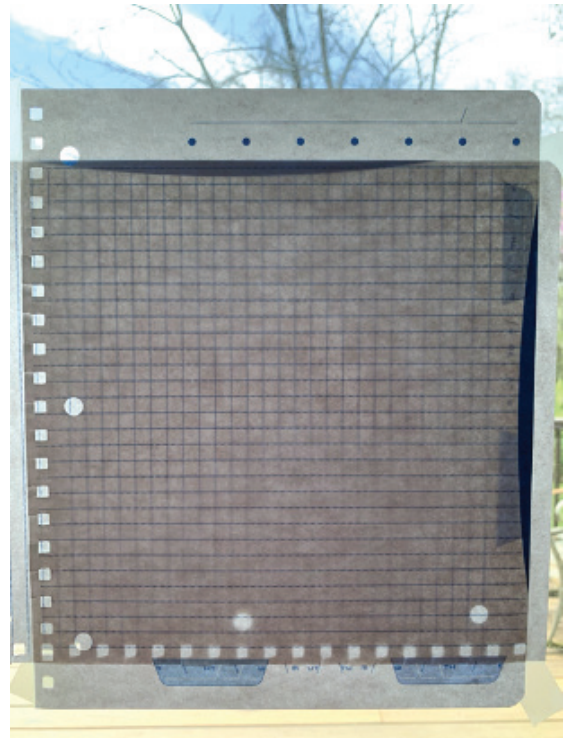
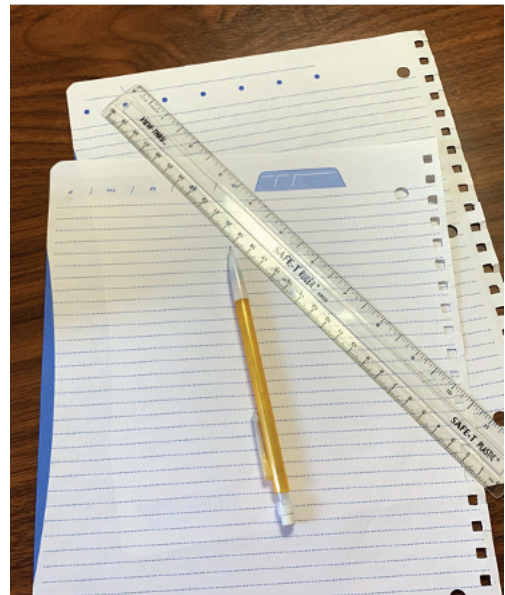
# How to Make Grid Paper

## Materials

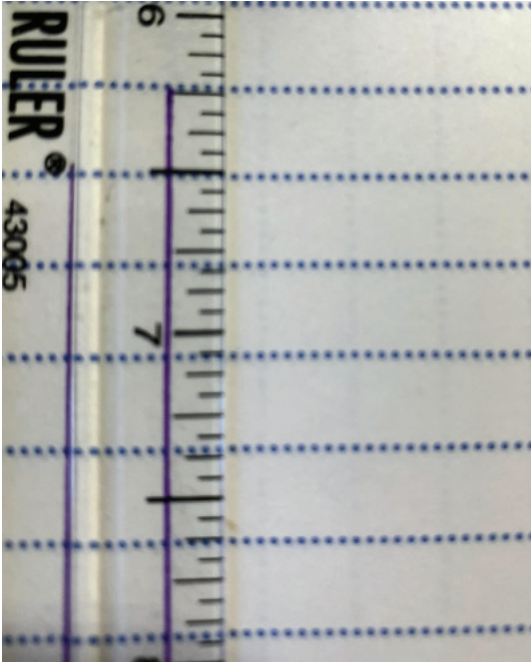
- 2 sheets of lined notebook paper
- Straight edge  
*ruler, book, cardboard, or something that is straight and sturdy*
- Pencil or pen
- Tape, *optional*

## How to Make

1. Turn one sheet of notebook paper so that the lines go up and down.
2. Place the other sheet of notebook paper over the top of the first, so that the lines go across. *If you look carefully, you will see the lines of the bottom sheet very faintly. If you can't see the lines, try in a room with a bright light. If it is a sunny day, you can tape the two sheets of paper to a window.*



- Using a ruler or other straight edge, trace the lines from the bottom sheet onto the top sheet.



- Continue tracing lines until you have created a grid the size you need. For example, if you need a 10 by 10 grid, trace 11 lines onto the top paper.

