

## Lesson 4: 1s, 2s, 5s, 10s, and 11s

### Lesson Objectives

- Students will solve the 1s, 2s, 5s, 10s, and 11s using the multiplication table.
- Students will identify multiples, factors, and products on a multiplication table.

### Instructional Materials

Material	Quantity	Description
Timer	1	
How Am I Doing? graph	1 per student	
Facts Practice graph	1 per student	
Colored pencils	1 per student	
Display Masters	1 each	<ul style="list-style-type: none"><li>• Preview: Key Ideas: 1s, 2s, 5s, 10s, and 11s</li><li>• Blank Multiplication Table</li></ul>
Handouts	1 per student	<ul style="list-style-type: none"><li>• Timed Fact Practice 4</li><li>• Cumulative Review</li><li>• Blank Multiplication Table</li><li>• Practice</li><li>• Independent Practice</li></ul>
Answer Keys	1 each	<ul style="list-style-type: none"><li>• Timed Fact Practice 4</li><li>• Cumulative Review</li><li>• Practice</li><li>• Independent Practice</li></ul>
Student name sticks	1 per student	

## Timed Fact Practice

Distribute the Timed Fact Practice 4 handout of the chosen set of facts: multiplication, division, or a combination of the two. Remember to use the same set of facts throughout the module.

**Say:** *When I say, "begin," you will have one minute to complete the 20 multiplication/division/mixed facts. Start with the first one, going across the rows. If you make a mistake, cross out the wrong answer and write the correct answer next to it. When I say, "stop" or the timer goes off, put your pencil down.*

**Say:** *Ready? Begin.*

After the timer goes off, display the Timed Fact Practice 4 Answer Key and have students use a colored pencil or marker to check their work and write the number correct on the score line on the Facts Practice Graph.

Then have students graph the number correct. As the lessons go along, connect the new point with the previous lesson's point.

## Cumulative Review

Have students complete the Cumulative Review handout. Go over the answers. Correct misconceptions. Have students use a colored pencil to make corrections as needed. Collect student papers to determine who needs additional instruction.

## Preview

This lesson will build on students' conceptual knowledge of skip-counting, repeated addition, and equal partitioning. Students will become more familiar with multiplies and the commutative property of multiplication as they create and solve mathematical equations using the multiplication table. Students will use this knowledge to quickly recall

facts and to increase fact fluency.

Display and introduce through a brief explanation the key ideas for this lesson:

- The numbers in a skip-count sequence are called multiples. For example, when skip-counting by 10s, the skip-count sequence 10, 20, 30... represents the multiples of 10.
- The products in a multiplication table are the multiples of the column/row number.

Use the Key Ideas: 1s, 2s, 5s, 10s, and 11s  display master as needed.

## Engage Prior/Informal Knowledge

To open the lesson, present questions to activate students' background knowledge related to the content to be taught in this lesson. Ask students questions such as:

- What strategies can you use to solve a multiplication problem? (repeated addition, skip counting)
- If you know the answer to  $5 \times 10$ , what other fact do you know? How do you know? ( $10 \times 5$ . The commutative property of multiplication says that  $10 \times 5 = 5 \times 10$ .)
- How can  $6 + 6 + 6 + 6$  be represented as a multiplication expression? ( $6 \times 4$ ) Draw a number line to represent this expression.

If students cannot answer these questions, stop and explicitly teach the material.

## Demonstrate

1. Display the Blank Multiplication Table  display master and distribute the Blank Multiplication Table handout.

**Say:** *You already know some of these facts.*

Select a student by choosing a name stick.

**Say:** *Which column/row of facts would you like to fill in first?*

Think aloud as you fill in the requested column/row. Be sure to say the sequence aloud.

Example: 10s column

**Say:** *1 times 10 equals 10.*

Display 10 in the first row of the 10s column. Have students do the same.

Repeat for rows 2 through 12, filling in the 10s down the column. 

**Say:** *Are there any other 10s that can be filled in on this multiplication table? (yes) Where are they? (the 10s row)*

**Say:** *I can also complete the 10s row. If I know  $1 \times 10$ , I also know  $10 \times 1$  because of the commutative property of multiplication.*

Complete the 10s row.

**Say:** *Why do these rows and columns have the same products? (the commutative property of multiplication)*

 2. Repeat step 1 to complete the 1s, 2s, 5s, and 11s.

Encourage students to identify patterns when filling in the multiples for each number. For example, they should be able to identify a 0, 2, 4, 6, 8 pattern in the 1s digit for multiples of 2, and a 0, 5, 0, 5 pattern for multiples of 5.

**TEACHER NOTE**

Draw students' attention to the fact that there is a pattern when writing the multiples of 10: The 1s digit is always zero, and the 10s digit increases by 1 each time.

**TEACHER NOTE**

It may be helpful to list the multiplication equations from both the column and row to draw attention to the commutative property of multiplication. For example, list  $1 \times 10 = 10$  and  $10 \times 1 = 10$ .

For 11s, the 1s and 10s digits both increase by 1 each time. Students may have trouble with  $11 \times 10$ ,  $11 \times 11$ , and  $11 \times 12$ . Have students find  $11 \times 10$  using the pattern for 10s, then continue to add 1 to the 10s and 1s digit to find  $11 \times 11$  and  $12 \times 12$ .

3. Count how many facts have been filled in.

Have students determine the number of facts that they know automatically. Emphasize how many facts students already know. There are 144 facts, and students already know more than half of them.

4. Teach students the names of the parts of the multiplication table.

**Say:** *In the multiplication problem  $5 \times 10 = 50$ , the product is 50.*

Draw attention to the product 50 on the multiplication table.

**Say:** *The products, the answers to a multiplication problem, are located on the inside of the multiplication table.*

Draw attention to the factors, 5 and 10, on the multiplication table.

**Say:** *The factors, the numbers multiplied together in a multiplication table, are located in the first row and leftmost column.*

Draw attention to the multiples of 5 in a row and column.

**Say:** *These are the multiples of 5: 5, 10, 15, 20... The multiples of 5 are found in the 5s row or the 5s column.*

5. Identify the multiplication expression for a product on the multiplication table.

Remind students of the definition of a product.

Draw attention to a product that has been completed on the multiplication table.

**Say:** *What multiplication expression goes with this product?*

Example: Point to the product that represents  $2 \times 10 = 20$ .

**Say:** *What is the product? (20) What are the factors (2, 10) What multiplication expressions represent this problem? ( $5 \times 2$ ,  $2 \times 5$ ) Why are there two expressions? (commutative property of multiplication)*

Repeat several times with additional products.

## Practice



**WATCH FOR**  
Some students do not connect the rows with the columns in a multiplication table. Draw attention to the corresponding row and column. Provide additional instruction on the commutative property of multiplication and the multiplication table's design as needed.

For each practice activity, provide detailed feedback to students, highlighting what was done correctly and what needs improvement. Provide opportunities for students to correct their errors. Collect student work to review and monitor student progress.

**Activity 1:** Help students complete the activity on the Practice handout. Select a few students to verbalize their reasoning and each step in the process.

**Activity 2:** Select a game for student pairs or small groups to play to provide more opportunities to practice the facts in this lesson.

## Independent Practice

1. Have students work independently to complete the activity on the Independent Practice handout.

2. Go over the answers (students self-check and correct, using a colored pencil).
3. Have students record the number correct in the box and complete their How Am I Doing? graph.
4. Collect the papers to review and monitor student progress.

## Closure

Review the key ideas. Have students provide examples from the lesson.

Have students discuss their answer the following questions.

- If you complete the 5s column on the multiplication table, what else can you complete? Why?
- Explain where to find factors, multiples, and products on the multiplication table.

Clear up any misconceptions. Students who believe that the rows of a multiplication table are unrelated to the columns need additional instruction.