4 Module 1

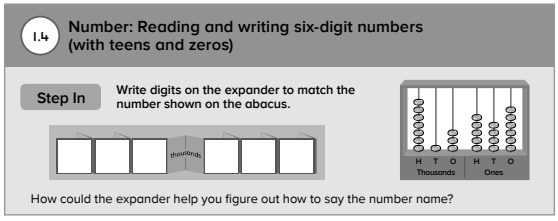
ORIGO STEPPING STONES 2.0

Core Focus

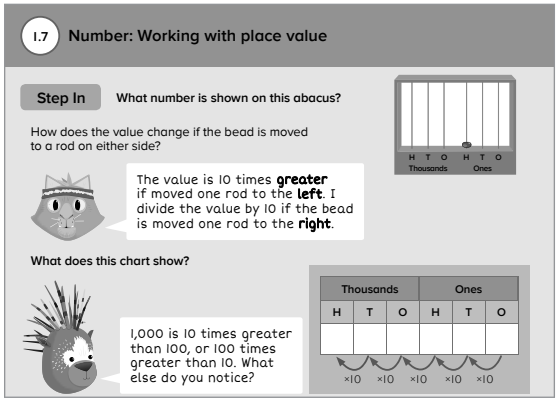
- Number: Reading and writing six-digit numbers and working with place value
- Multiplication: Extending the twos, fours, eights, and tens facts and exploring patterns

Number

- Number sense strategies from previous grades now extend to six-digit numbers. Students learn to read, write, draw, compare, and order these numbers using familiar and new models.
- Six-digit numbers are read in groups of three digits (starting from the left). Use of the **numeral expander** in all these lessons help students make sense of reading and ordering these numbers. The **abacus** also helps students visualize place value.



In this lesson, students use a numeral expander to read and write six-digit numbers. An abacus is used to represent these numbers.



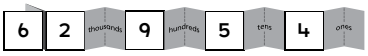
In this lesson, students consider the role of place value to write six-digit numbers. They use an abacus model and place-value chart to assist in creating new numbers.

Ideas for Home

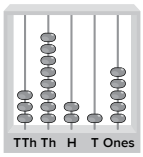
- Find six-digit numbers like city populations, or make up your own, and ask your child to read them out loud.
- Compare six-digit numbers and ask your child to explain why one number is greater or less than another.

Glossary

- **Numeral expanders** show how the position of each digit in a number represents a designated place value.



- An **abacus** is a calculation tool that excels at demonstrating place value. For example, this model shows how *3 ten-thousands* is the same as *3 × 10,000*, and so on.



Helpful videos

View these short one-minute videos to see these ideas in action.

www.bit.ly/O1_9
www.bit.ly/O1_33

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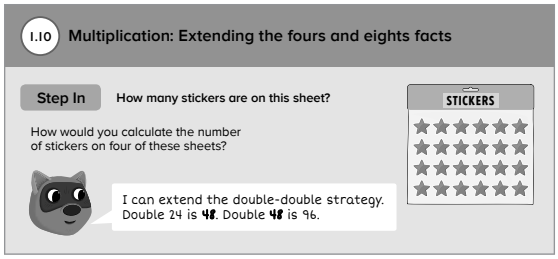
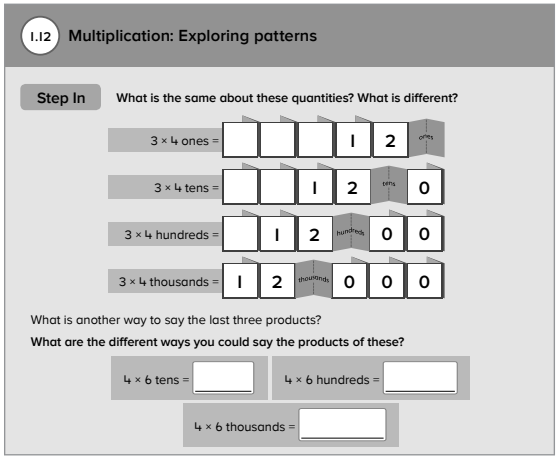
Multiplication

- Students extend multiplication strategies that were explained in earlier grade levels to multiply one- and two-digit numbers, including the **double-double strategy** and the **double-double-double strategy**.



In this lesson, students extend strategies to multiply one- and two-digit numbers.

- Students explore patterns involving place value in multiplication. The numeral expander provides a place-value model that discourages inaccurate explanations like *I add zeros when I multiply by multiples of 10*.



The numeral expander shows that 3 × 4 tens equal 12 tens, which is the same as 120, etc. Accurate place-value language supports deep understanding of multiplying and dividing by magnitudes of ten.

Ideas for Home

- Practice the doubles strategy with household items. Four pairs of shoes is double double the total number of shoes, or double double 6 would describe the total number of eggs in two full cartons.

Glossary

- The **doubles strategy** is a method of mental multiplication. If a number is multiplied by a power of two, the calculation can be performed by repeatedly doubling the numbers. For example, 4 × 8 = 32 is the same as 4 × 2 × 2 × 2, or *double double double* 4.