InsightMath California

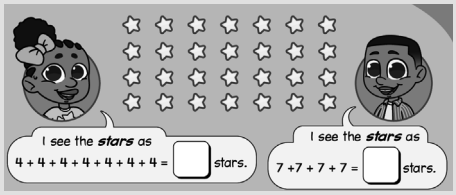
Counting in Groups

Family Guide | Grade 2 | Unit 7

Your student is exploring how creating structured, equal groups supports visualizing numbers, efficient counting, and understanding money.

Key Math Ideas

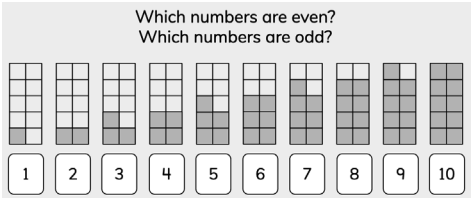
Before this unit, your student learned that multiples of ten represent groups of ten and that doubles are two equal parts. They also have sorted collections, noting that counting is quicker with equal groups or by identifying patterns. This unit will build on this understanding by exploring even and odd numbers, models for counting with groups, and money concepts. Students will share and pair objects to see how quantities can be split evenly and use models called arrays to organize items into equal groups. They will also practice skip counting and identifying coin values to solve money problems.



The array of stars can be thought of two different ways, either by adding rows of 4 or rows of 7 to find the total.

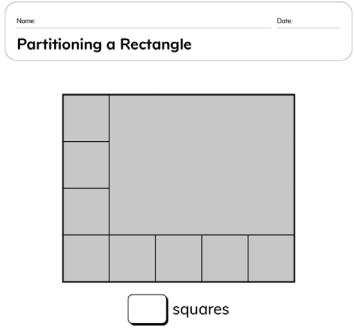
→ At the beginning of the unit, your student will learn to

- define and model even and odd numbers by creating two equal rows or rows of two with and without a leftover (as shown to the right);
- write equations to represent an even number as the sum of the same two numbers, such as 8 = 4 + 4;
- recognize and describe number patterns to identify even and odd numbers, such as even numbers ending in 0, 2, 4, 6, and 8 and odd numbers ending in 1, 3, 5, 7, and 9.



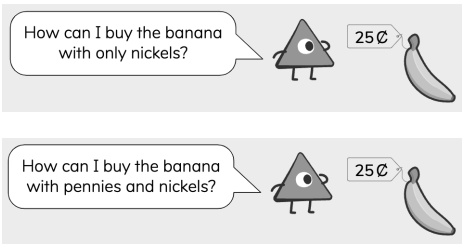
→ In the middle of the unit, your student will learn to

- understand how an array model is an efficient way to organize and count by equal groups;
- use skip counting by 2s, 5s and 10s as an efficient strategy for finding totals in arrays and to solve equations or word problems;
- partition, or break apart, a rectangle into equal-sized squares.



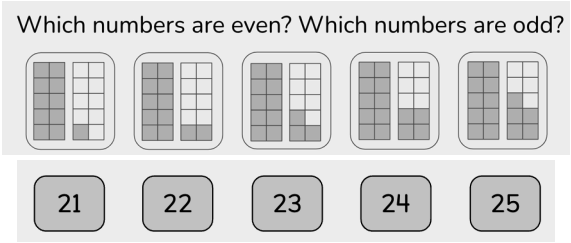
→ By the end of the unit, your student will learn to

- recognize and distinguish between pennies, nickels, dimes, and quarters by appearance and value;
- determine the values of sets of coins and create sets of coins worth a given amount;
- solve money problems involving addition and subtraction, including determining which coins to pay with and which coins to get back in change.



Helpful Hint

Encourage and support your student to continue using visual models and pairs to determine if numbers are even or odd until they can confidently use the patterns in the digits.



Tips for Supporting Your Student at Home

Questions to Ask Your Student

→ At the beginning of the unit:

- What happens when we split the number of objects into two groups or into pairs?
- How do you know if a number is even or odd?

→ In the middle of the unit:

- What is an array? How does it help in finding totals?
- Is there a different array you can make with the total? How do you know?
- How can we figure out the number of squares needed to cover a rectangle?

→ Later in the unit:

- What are the values of a penny, nickel, and dime?
- How do you write the value of money using a decimal point?

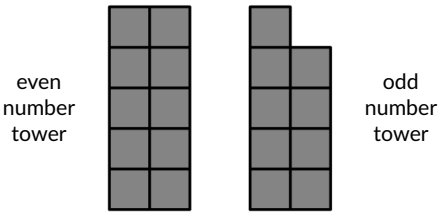
If...	Try...
your student believes that having more coins in a collection means it is worth more money regardless of the value of the coins (for example, if they say "2 dimes is less than 4 pennies because 2 is less than 4") . . .	having them identify the value of each coin, like 1 cent for a penny and 10 cents for a dime. Then help them calculate the total value and recognize that 4 pennies have a value of 4 cents while 2 dimes are worth 20 cents.

Student Strengths Spotlight

I start by observing what is happening in the problem.	Your student will take time to observe the number and type of coins to solve problems.
I notice when things repeat.	Your student will notice and use repeating patterns when deciding if a number is even or odd, first with visual patterns then with number patterns.

Try This Together!

- **Even and Odd Towers!** Build towers to compare odd and even numbers. Use any building blocks you have at home to create a tower with two columns. Make an even number tower with two equal columns or an odd number tower where one column is one more than the other. Have your student tell you if it is even or odd without counting the number of blocks. Then have them count the blocks and make a connection to the patterns of even and odd numerals. As an added challenge, ask your student to turn an even number tower into an odd number tower, or the other way around!



- **Flexible Arrays:** Provide your students with a set of the same item, such as crackers or toys cars that are the same size. Ask your student to count them by making an array. Extend by asking them if they can make an array a different way. For example, 12 crackers could be organized in 3 rows of 4 crackers or 2 rows of 6 crackers (and more!).
- **Money Madness!** Next time you are at the store, find an item that is less than $1 and ask your student how they would use pennies, nickels, dimes, and/or quarters to pay for the item. If you have coins with you, letting them use the coins to count the total will help their understanding.
- **Sort and Count Spare Change.** Take spare change and have your student sort them into pennies, nickels, dimes, and quarters, naming the coins and each of their values. Have them count the total value of the coins by skip counting by 1s, 5s, 10s with the pennies, nickels, and dimes.