Unit 4, Lesson 12

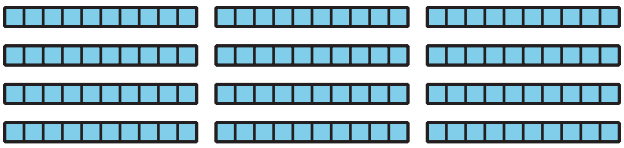
Multiply Multiples of 10

Let's multiply 1-digit numbers by multiples of 10.

Warm-up

Notice and Wonder: Tens

What do you notice? What do you wonder?



Activity 1

A Whole Lot of Dollars

Six friends played a board game that uses play money. The paper bills come in $5, $10, $20, $50, and $100.

1. Every player starts with $100. Which of the following could be the bills that a player started with?

   Write an expression to represent the play bills and the amount in dollars.

bills	expression	dollar amount
one $100 bill		
four $20 bills		
ten $10 bills		
ten $5 bills		
five $20 bills		
twenty $10 bills		
twenty $5 bills		
two $50 bills		

2. During the game, Noah had to pay Lin $150. He gave her that amount using the same type of bill.

   a. Which bill and how many of it could Noah have used to make $150? Name all the possibilities.

   b. Write an expression for each way that Noah could have paid Lin.

3. The table shows what the players had at the end of the game. The person with the most money wins. Who won the game?

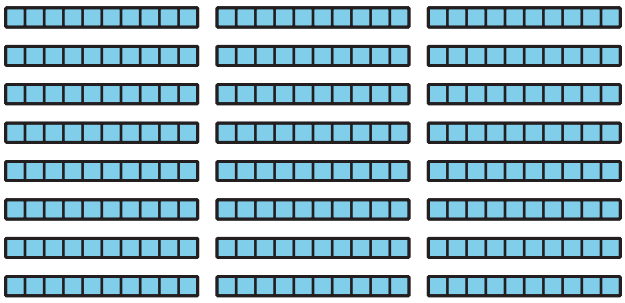
   Write an expression to represent the bills each person had and the amount in dollars.

player	bills	expression	dollar amount
Andre	nine $10 bills and ten $5 bills		
Clare	fourteen $10 bills		
Jada	ten $10 bills and three $50 bills		
Lin	eight $20 bills		
Noah	six $50 bills		
Tyler	twenty-one $10 bills		

Activity 2

Two Strategies

1. Two students used base-ten blocks to find the value of 8×30. They drew this diagram to show the blocks.



   - Jada counted: 30, 60, 90, 120, 150, 180, 210, 240, and said the product is 240.
   - Kiran said he knew 8×3 is 24, then found 24×10 to get 240.

   How are Jada and Kiran's strategies alike? How are they different?

2. Find the value of each expression. Explain or show your reasoning.

   a. 5×60

   b. 8×50

c. 4×30

d. 7×40

e. 9×20