

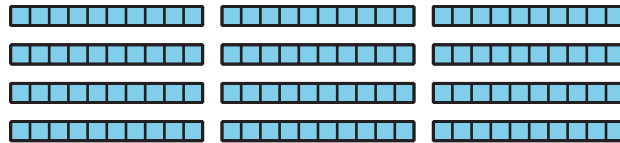
# Multiply Multiples of 10

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

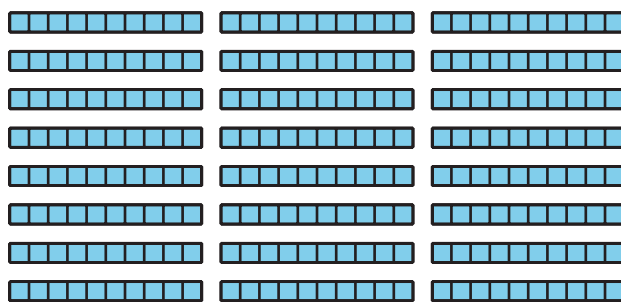
Write an expression to represent the bills each person had and the amount in dollars.

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

## Activity 2

### Two Strategies

- Two students used base-ten blocks to find the value of  $8 \times 30$ . 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  $8 \times 3$  is 24, then found  $24 \times 10$  to get 240.

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

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

a.  $5 \times 60$

b.  $8 \times 50$

c.  $4 \times 30$

d.  $7 \times 40$

e.  $9 \times 20$

