Unit 4, Lesson 16

# Multiply Numbers Greater than 20

Let's multiply numbers that are greater than 20.

Warm-up

## Number Talk: Three Times Some Numbers

Find the value of each expression mentally.

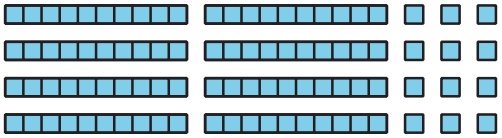
- $3 \times 10$
- $3 \times 20$
- $3 \times 50$
- $3 \times 25$

Activity 1

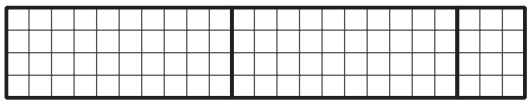
# $4 \times 23$, Represented

1. Here is how Clare and Andre represented $4 \times 23$.

**Clare**



**Andre**



a. How does each representation show $4 \times 23$?

b. How could you use Clare's base-ten diagram to find the value of $4 \times 23$?

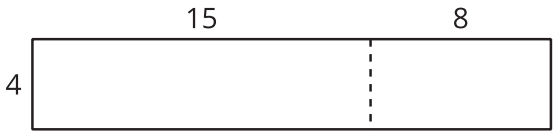
c. How could you use Andre's area diagram to find the value of $4 \times 23$?

2. Diego tried different ways to partition, or split, a diagram to help him find the value of $4 \times 23$.

**A**



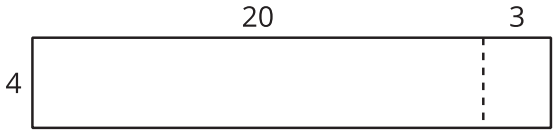

**B**




**C**




**D**




a. What do you notice about the numbers in his diagrams?

b. Which diagram would you use to find the value of $4 \times 23$? Explain your reasoning.

3. Find the value of $3 \times 28$. Show your thinking using diagrams, symbols, or other representations.

Activity 2

## Some Fine Products

1. To find the value of $2 \times 37$, Mai started by writing this equation:

$$2 \times 30 = 60$$

Describe or show what Mai could do to finish finding the value of $2 \times 37$.

2. Find the value of each product. Show your reasoning.

a. $3 \times 32$

b. $2 \times 43$

c. $4 \times 22$

d. $3 \times 29$

Activity 3

# Play Close to 100, Multiplication

Play Close to 100, Multiplication with a partner.

1. Place the cards facedown.
2. Each player draws 4 cards.
3. Each player chooses 2 cards to complete the factors in that round's equation. The goal is to make a product as close to 100 as possible. Each player writes their 2 factors and their product.
4. The player whose product is closest to 100 wins the round.
5. Play 5 rounds. The player who wins the most rounds wins the game.

Game 1

Round 1

$\square \times 1 \square = _____$

Round 2

$\square \times 1 \square = _____$

Round 3

$\square \times 1 \square = _____$

Round 4

$\square \times 1 \square = ____$

Round 5

$\square \times 1 \square = ____$

Game 2

Round 1

$\square \times 2 \square = ____$

Round 2

$\square \times 2 \square = ____$

Round 3

$\square \times 2 \square = ____$

Round 4

$\square \times 2 \square = ____$

Round 5

$\square \times 2 \square = ____$

