Lesson 16: Multiply Numbers Larger than 20

- Let's multiply numbers that are larger than 20.

Warm-up: Number Talk: Three Times Some Numbers

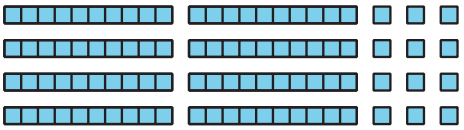
Find the value of each expression mentally.

- 3×10
- 3×20
- 3×50
- 3×25

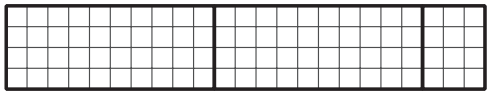
16.1: 4×23, Represented

1. Here is how Clare and Andre represented 4×23.

Clare



Andre



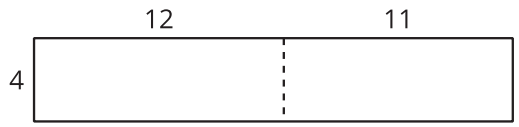
a. How does each diagram show 4×23?

b. How could we use Clare's diagram to find the value of 4×23?

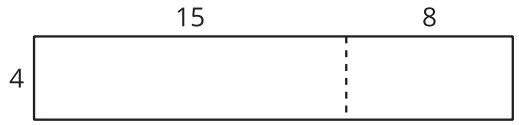
c. How could we use Andre's diagram to find the value of 4×23?

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

A

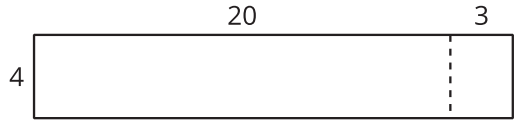


B



C

D



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

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

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

16.2: Some Fine Products

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

$$2 \times 30 = 60$$

Describe or show what Mai would do to finish finding the value of 2×37.

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

a. 3×32

b. 2×43

c. 4×22

d. 3×29

16.3: Play Close to 100, Multiplication

Play Close to 100, Multiplication with a partner.

1. Place the cards face down.
2. Each player draws 4 cards.
3. Each player chooses 2 cards to complete the expression to make a value as close to 100 as possible. Write the 2 digits and the product.
4. Player closest to 100 wins.
5. Play 5 rounds. Player who wins the most rounds wins.

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

$\square \times 2 \square = \_\_\_\_$