LESSON MAKER PRO

Multiply With Models

Use place value, arrays, and area models to solve products.

GRADE 4 · 4.NR.2.3

4.NR.2.3 "Solve relevant problems involving multiplication of a number with up to four digits by a 1-digit whole number or involving multiplication of two two-digit numbers using strategies based on place value and the properties of operations..."

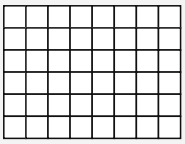
NAME _____ DATE _____

BREAK APART FACTORS

Break apart a factor into tens and ones, then multiply each part. An array or area model can show the smaller products, and you add them to find the total.

WORKED EXAMPLE

Use the array to find the product.

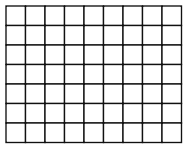


1. 6 × 8 = 6 × (5 + 3)
2. 6 × 5 = 30
3. 6 × 3 = 18
4. 30 + 18 = 48

Answer: 48

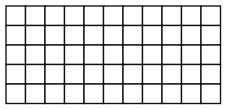
PRACTICE 6 problems

1 What multiplication equation and product does the array show?



ANSWER _____

2 What multiplication equation and product does the array show?



ANSWER _____

3 Find the product: 3,407 × 3

ANSWER _____

4 Find the product: 2,156 × 4

ANSWER _____

5 Use place value to find the product: 24 × 16

ANSWER _____

6 Use place value to find the product: 32 × 27

ANSWER _____

APPLY IT Show your work

1 At a game club, the area model represents equal prize packs of cards. What total number of cards does the model show?

	10	3
20	200	60
6	60	18

ANSWER _____

2 A science center gives 1,248 sticker sheets to each of 6 classrooms. How many sticker sheets does the science center give away?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Use the area model to find the product. Write the four partial products and the total. Then explain how the partial products are related to the factors.

	30	6
40		
7		

WORK SPACE AND ANSWER

ANSWER KEY

Multiply With Models

GRADE 4 · 4.NR.2.3

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	What multiplication equation and product does the array show?	**7 × 9 = 63**
2	What multiplication equation and product does the array show?	**5 × 11 = 55**
3	Find the product: 3,407 × 3	**10,221**
4	Find the product: 2,156 × 4	**8,624**
5	Use place value to find the product: 24 × 16	**384**
6	Use place value to find the product: 32 × 27	**864**

PART 2 · APPLY IT

1. **338 cards** Add the four partial products: 200 + 60 + 60 + 18 = 338. The model shows 26 × 13.
2. **7,488 sticker sheets** Multiply 1,248 × 6. The product is 7,488.

CHALLENGE

1,200 + 240 + 210 + 42 = 1,692. The partial products multiply 40 and 7 by 30 and 6, which are the place-value parts of 47 × 36.

Accept any correct place-value decomposition and equivalent equations. For the challenge, accept a clear explanation that the four partial products come from multiplying the tens and ones parts of both factors.