LESSON MAKER PRO

Multiply Power

Use place value to solve bigger multiplication problems.

GRADE 4 · TEKS 4.4.D

4.4.D "use strategies and algorithms, including the standard algorithm, to multiply up to a four- digit number by a one-digit number and to multiply a two-digit number by a two-digit number. Strategies may include mental math, partial products..."

NAME _____ DATE _____

MULTIPLY BY PLACE VALUE

Line up digits by place value. For a two-digit multiplier, multiply by the ones digit, then multiply by the tens digit, and add the partial products. For a one-digit multiplier, multiply each place value and regroup when needed.

WORKED EXAMPLE

36 × 24

	20	4
30	600	120
6	120	24

1. Split 36 into 30 + 6 and 24 into 20 + 4.
2. The four areas are 600, 120, 120 and 24.
3. Group by multiplier: 36 × 4 = 144 and 36 × 20 = 720.
4. The written algorithm adds those same partial products: 144 + 720 = 864.

Answer: 864

PRACTICE 6 problems

1 3,482 x 6

ANSWER _____

2 1,709 x 5

ANSWER _____

3 4,056 x 7

ANSWER _____

4 47 × 32. Show the standard algorithm.

ANSWER _____

5 68 x 14

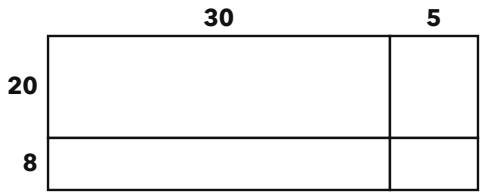
ANSWER _____

6 39 x 27

ANSWER _____

APPLY IT Show your work

1 A game club buys 28 packs of cards, with 35 cards per pack. Complete the area model, then show how its partial products connect to the standard algorithm.



ANSWER _____

2 During a reading challenge, 7 classes each read 1,246 pages. How many pages did the classes read altogether?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Use the distributive property to solve 46 x 19. Show how you can use 20 and subtract one group of 46.

WORK SPACE AND ANSWER

ANSWER KEY

Multiply Power

GRADE 4 · TEKS 4.4.D

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	3,482 x 6	**20,892**
2	1,709 x 5	**8,545**
3	4,056 x 7	**28,392**
4	47 × 32. Show the standard algorithm.	**1,504; partial products 94 and 1,410.**
5	68 x 14	**952**
6	39 x 27	**1,053**

PART 2 · APPLY IT

1. **980 cards; areas 600, 100, 240, 40. Combine 100 + 40 = 140 and 600 + 240 = 840; the algorithm adds 140 + 840 = 980.** The 28 × 5 partial product is 140; the 28 × 30 partial product is 840. Connect both to the four model regions.
2. **8,722 pages** Multiply 1,246 x 7. The classes read 8,722 pages altogether.

CHALLENGE

874; 46 x 20 - 46 = 920 - 46 = 874

Accept correct standard-algorithm work, partial products, or other accurate place-value strategies. For the challenge, accept equivalent equations that show 46 x 20 minus 46.