LESSON MAKER PRO

Place Value Power

Use place value to multiply by 10 and 100.

GRADE 4 · TEKS 4.4.B

4.4.B "determine products of a number and 10 or 100 using properties of operations and place value understandings;"

NAME _____ DATE _____

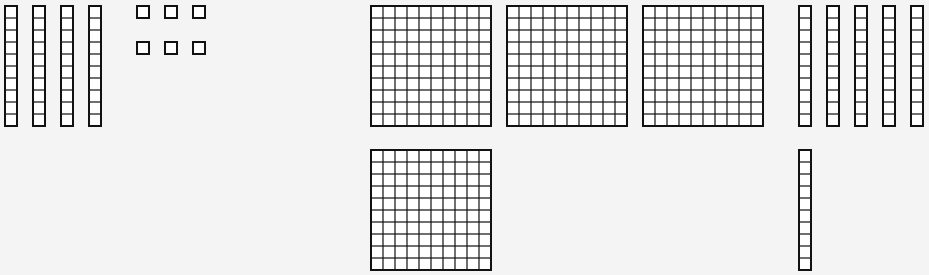
SHIFT THE VALUE

When you multiply by 10, each digit moves one place to the left, so its value becomes 10 times greater. When you multiply by 100, each digit moves two places to the left, so its value becomes 100 times greater.

WORKED EXAMPLE

46 x 10

Before multiplying by 10 **After multiplying by 10**



1. 46 = 4 tens + 6 ones.
2. Multiplying by 10 makes 4 hundreds + 6 tens.
3. 4 hundreds + 6 tens = 460.

Answer: 460

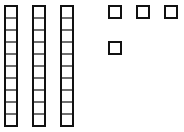
PRACTICE 6 problems

1 7 x 10 =

ANSWER _____

PRACTICE Continued practice

2 Read the model. Multiply its value by 10. Explain how the place values change.



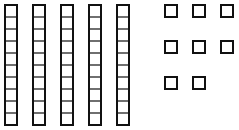
ANSWER _____

_____

3 9 x 100 =

ANSWER _____

4 Read the model. Multiply its value by 100. Explain how the place values change.



ANSWER _____

_____

5 125 x 10 =

ANSWER _____

6 306 x 100 =

ANSWER _____

APPLY IT Show your work

1 In a video game, each completed quest earns 100 coins. Kai completes 24 quests. How many coins does Kai earn?

WORK SPACE

ANSWER

2 A trading card club puts 10 cards in each pack. The club makes 63 packs. How many cards does the club use?

WORK SPACE

ANSWER

CHALLENGE One step up

Mina says that 407 x 100 = 4,070 because she added one zero. Is Mina correct? Explain your reasoning and find the correct product.

WORK SPACE AND ANSWER

ANSWER KEY

Place Value Power

GRADE 4 · TEKS 4.4.B

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	7 x 10 =	**70**
2	Read the model. Multiply its value by 10. Explain how the place values change.	**340. Multiplying 34 by 10 changes 3 tens and 4 ones into 3 hundreds and 4 tens.**
3	9 x 100 =	**900**
4	Read the model. Multiply its value by 100. Explain how the place values change.	**5,800. Multiplying 58 by 100 changes 5 tens and 8 ones into 5 thousands and 8 hundreds.**
5	125 x 10 =	**1,250**
6	306 x 100 =	**30,600**

PART 2 · APPLY IT

1. **2,400 coins** Multiply 24 x 100. Each digit in 24 shifts two places left, so 24 x 100 = 2,400.
2. **630 cards** Multiply 63 x 10. Each digit in 63 shifts one place left, so 63 x 10 = 630.

CHALLENGE

Mina is not correct. Multiplying by 100 shifts each digit two places left, so 407 x 100 = 40,700.

Accept answers written with or without commas when the value is correct. For the challenge, accept any clear explanation that multiplying by 100 shifts digits two places left or adds two zeros to a whole number.