

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

$$46 \times 10$$

1. $46 = 4 \text{ tens} + 6 \text{ ones}$.
2. Multiplying by 10 makes 4 hundreds + 6 tens.
3. 4 hundreds + 6 tens = 460.

Answer: 460

PRACTICE 6 problems

1 $7 \times 10 =$

ANSWER _____

2 $34 \times 10 =$

ANSWER _____

3 $9 \times 100 =$

ANSWER _____

4 $58 \times 100 =$

ANSWER _____

5 $125 \times 10 =$

ANSWER _____

6 $306 \times 100 =$

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

CHALLENGE

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

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	$7 \times 10 =$	70
2	$34 \times 10 =$	340
3	$9 \times 100 =$	900
4	$58 \times 100 =$	5,800
5	$125 \times 10 =$	1,250
6	$306 \times 100 =$	30,600

PART 2 • APPLY IT

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

CHALLENGE

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

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.