LESSON MAKER PRO

Place Value Shifts

Track what happens when a digit changes places.

GRADE 4 · MA.4.NSO.1.1

MA.4.NSO.1.1 "Express how the value of a digit in a multi-digit whole number changes if the digit moves one place to the left or right."

NAME _____ **DATE** _____

SHIFT THE VALUE

Each place to the left makes a digit's value 10 times as much. Each place to the right makes a digit's value 1/10 as much.

WORKED EXAMPLE

In 46,281, the digit 6 moves one place to the right. What is its new value?

1. The 6 is in the thousands place, so its value is 6,000.
2. One place to the right is the hundreds place.
3. A 6 in the hundreds place has a value of 600.

Answer: 600. The value is 1/10 as much as before.

PRACTICE 6 problems

1 In 73,459, the digit 3 moves one place to the left. What is its new value?

ANSWER _____

2 In 812,647, the digit 2 moves one place to the right. What is its new value?

ANSWER _____

3 A digit has a value of 9,000. It moves one place to the right. What is its new value?

ANSWER _____

4 In 158,204, the digit 5 moves one place to the left. What is its new value?

ANSWER _____

5 A digit has a value of 70. It moves one place to the left. What is its new value?

ANSWER _____

6 In 94,731, the digit 4 moves one place to the right. What is its new value, and how much smaller is it than before?

ANSWER _____

APPLY IT Show your work

1 A game score screen shows 384,215 points. In a place-value puzzle, the digit 4 moves one place to the left. What is the digit's new value?

WORK SPACE

ANSWER _____

2 In a space exploration game, a code shows 627,431. The digit 7 moves one place to the right. What is the digit's new value?

WORK SPACE

ANSWER _____

CHALLENGE One step up

In 550,505, the 5 in the ten-thousands place moves one place to the right. At the same time, the 5 in the hundreds place moves one place to the left. What is each new value? Explain how each value changed.

WORK SPACE AND ANSWER

ANSWER KEY

Place Value Shifts

GRADE 4 · MA.4.NSO.1.1

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	In 73,459, the digit 3 moves one place to the left. What is its new value?	**30,000. The value is 10 times as much.**
2	In 812,647, the digit 2 moves one place to the right. What is its new value?	**200. The value is 1/10 as much.**
3	A digit has a value of 9,000. It moves one place to the right. What is its new value?	**900. The value is 1/10 as much.**
4	In 158,204, the digit 5 moves one place to the left. What is its new value?	**500,000. The value is 10 times as much.**
5	A digit has a value of 70. It moves one place to the left. What is its new value?	**700. The value is 10 times as much.**
6	In 94,731, the digit 4 moves one place to the right. What is its new value, and how much smaller is it than before?	**400. It is 3,600 smaller than before.**

PART 2 · APPLY IT

1. **40,000. The value is 10 times as much.** The 4 starts in the thousands place, so it is worth 4,000. Moving left puts it in the ten-thousands place, where it is worth 40,000.
2. **700. The value is 1/10 as much.** The 7 starts in the thousands place, so it is worth 7,000. Moving right puts it in the hundreds place, where it is worth 700.

CHALLENGE

The 5 from the ten-thousands place has a new value of 5,000, which is 1/10 as much. The 5 from the hundreds place has a new value of 5,000, which is 10 times as much.

Accept "one tenth as much" for 1/10 as much and "ten times greater" for 10 times as much. For problem 6, accept "decreased by 3,600" as equivalent wording.