LESSON MAKER PRO

Place Value Power

Compare the values of digits in neighboring places.

GRADE 4 · 4.NOS.A.2

4.NOS.A.2 "Explain that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right (e.g., recognize that 700 ÷ 70 = 10 by applying concepts of place value and division)."

NAME _____ DATE _____

THE BIG IDEA

When a digit moves one place to the left, its value becomes 10 times as much. To compare the same digit in neighboring places, divide the larger value by the smaller value.

WORKED EXAMPLE

How many times as much is 8,000 as 800?

1. The 8 in 8,000 is worth 8,000.
2. The 8 in 800 is worth 800, one place to the right.
3. 8,000 ÷ 800 = 10.

Answer: 10 times

PRACTICE 6 problems

1 In 66,666, how many times as much is the 6 in the thousands place as the 6 in the hundreds place?

ANSWER _____

2 4,000 ÷ 400 = ___

ANSWER _____

3 In 52,000, the 5 is worth 50,000. If the 5 were one place to the right, what would it be worth?

ANSWER _____

4 ___ ÷ 700 = 10

ANSWER _____

5 In 77,000, what are the values of the two 7s? How many times as much is the 7 on the left worth?

ANSWER _____

6 A student says 3,000 ÷ 300 = 100. Is the student correct? Give the correct answer and explain why.

ANSWER _____

APPLY IT Show your work

1 A class earns 20,000 points for finishing a reading challenge and 2,000 points for reading one book. How many times as many points does the challenge earn?

WORK SPACE

ANSWER _____

2 In a video game, a big treasure chest holds 90,000 coins. A small chest holds one tenth as many coins. How many coins are in the small chest?

WORK SPACE

ANSWER _____

CHALLENGE One step up

In 444,444, one 4 is worth 40,000. What are the values of the 4 one place to its right and the 4 two places to its right? How many times as much is 40,000 as each value? Explain using steps of ten.

WORK SPACE AND ANSWER

ANSWER KEY

Place Value Power

GRADE 4 · 4.NOS.A.2

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	In 66,666, how many times as much is the 6 in the thousands place as the 6 in the hundreds place?	**10 times**
2	4,000 ÷ 400 = ___	**10**
3	In 52,000, the 5 is worth 50,000. If the 5 were one place to the right, what would it be worth?	**5,000**
4	___ ÷ 700 = 10	**7,000**
5	In 77,000, what are the values of the two 7s? How many times as much is the 7 on the left worth?	**70,000 and 7,000; the 7 on the left is worth 10 times as much.**
6	A student says 3,000 ÷ 300 = 100. Is the student correct? Give the correct answer and explain why.	**No. 3,000 ÷ 300 = 10 because 3,000 is 10 times as much as 300.**

PART 2 · APPLY IT

1. **10 times as many points** Divide 20,000 by 2,000. The 2 in 20,000 is one place to the left of the 2 in 2,000, so the quotient is 10.
2. **9,000 coins** Divide 90,000 by 10. Moving the 9 one place to the right changes its value from 90,000 to 9,000.

CHALLENGE

The two values are 4,000 and 400. Moving right one place makes the value one tenth as much, so 40,000 is 10 times as much as 4,000. Moving right two places makes it one tenth as much twice, so 40,000 is 100 times as much as 400.

Accept equivalent explanations that show each move to an adjacent place changes a digit's value by a factor of 10.