

Place Value Power

See how each place changes a digit's value.

GRADE 3 • TEKS 3.2.B

3.2.B "describe the mathematical relationships found in the base-10 place value system through the hundred thousands place;"

NAME _____

DATE _____

PLACES GROW BY TENS

Each place to the left is worth 10 times as much as the place to its right. Moving the same digit one place left makes its value 10 times greater. Moving it one place right makes its value one tenth as great.

WORKED EXAMPLE

Compare the values of the two 5s in 55,814.

1. The left 5 is in the ten-thousands place, so it is worth 50,000.
2. The right 5 is in the thousands place, so it is worth 5,000.
3. 50,000 is 10 times as much as 5,000.

Answer: The left 5 is worth 10 times as much as the right 5.

PRACTICE 6 problems

1 What is the value of the digit 5 in 54,321?

ANSWER _____

2 How many times as much is 70,000 as 7,000?

ANSWER _____

3 9,000 is how many times as much as 900?

ANSWER _____

4 What is the value of the digit 8 in 186,400?

ANSWER _____

5 A 3 has a value of 3,000. What is its value if it moves one place to the left?

ANSWER _____

6 In 620,000, how many times as much is the value of the digit 2 as the value of the digit 2 in 602,000?

ANSWER _____

APPLY IT Show your work

- 1** The school mascot's video gets 7,000 views on Monday and 70,000 views after it is shared by the whole district. How many times as many views does the shared video have?

WORK SPACE

ANSWER _____

- 2** A bird-watching app shows 126,000 photos uploaded statewide and 12,600 photos from one county. How many times as much does the digit 2 represent in the statewide number as in the county number?

WORK SPACE

ANSWER _____

CHALLENGE One step up

The number 505,050 has three 5s. List the value of each 5 from left to right. Explain how each value is related to the next value.

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	What is the value of the digit 5 in 54,321?	50,000
2	How many times as much is 70,000 as 7,000?	10 times
3	9,000 is how many times as much as 900?	10 times
4	What is the value of the digit 8 in 186,400?	80,000
5	A 3 has a value of 3,000. What is its value if it moves one place to the left?	30,000
6	In 620,000, how many times as much is the value of the digit 2 as the value of the digit 2 in 602,000?	10 times

PART 2 • APPLY IT

- 10 times as many views** Compare 70,000 and 7,000. The digit 7 is one place farther left in 70,000, so its value is 10 times greater.
- 10 times as much** In 126,000, the 2 is worth 20,000. In 12,600, the 2 is worth 2,000, and 20,000 is 10 times 2,000.

CHALLENGE

From left to right: 500,000, 5,000, and 50. Each 5 is two places to the left of the next 5, so each value is 100 times the next value.

Accept values written with or without commas. For comparison questions, accept "10 times" or "10 times as much."