

Place Value Builders

Build and break apart numbers through 100,000.

GRADE 3 • TEKS 3.2.A

3.2.A “compose and decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate;”

NAME _____

DATE _____

BUILD EVERY PLACE

Each digit tells how many ten thousands, thousands, hundreds, tens, or ones are in a number. To write expanded notation, add the value of each digit. A zero means there are none in that place.

WORKED EXAMPLE

Write 63,408 in expanded notation and as place-value parts.

1. The 6 is in the ten-thousands place, so its value is 60,000.
2. The 3 is in the thousands place, and the 4 is in the hundreds place.
3. The 0 means 0 tens, and the 8 means 8 ones.
4. Add the values: $60,000 + 3,000 + 400 + 8$.

Answer: $60,000 + 3,000 + 400 + 8$; 6 ten thousands, 3 thousands, 4 hundreds, 0 tens, 8 ones

PRACTICE 6 problems

- 1** Write 47,205 in expanded notation.

ANSWER _____

- 2** A base-ten model has 8 ten-thousand blocks, 1 thousand block, 6 hundred flats, 3 ten rods, and 9 ones. Write the number.

ANSWER _____

- 3** Write 90,070 as place-value parts. Tell how many ten thousands, thousands, hundreds, tens, and ones.

ANSWER _____

- 4** Write the number made by 5 ten thousands, 2 thousands, 0 hundreds, 4 tens, and 6 ones.

ANSWER _____

- 5** Fill in the blank: $70,000 + \underline{\hspace{1cm}} + 300 + 20 + 1 = 73,321$

ANSWER _____

- 6** Write 18,509 in two ways: expanded notation and place-value parts.

ANSWER _____

APPLY IT Show your work

- 1** At a video game tournament, Leo scored 34,208 points. Write his score in expanded notation.

WORK SPACE

ANSWER _____

- 2** In a building game, Ava collected 7 ten-thousands, 9 thousands, 5 hundreds, 0 tens, and 4 ones of virtual coins. How many virtual coins did she collect?

WORK SPACE

ANSWER _____

CHALLENGE One step up

I am a number less than 50,000. I have 4 ten thousands. I have twice as many thousands as hundreds. I have 2 hundreds, 6 tens, and 3 ones. What number am I? Explain how you found the thousands digit.

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Write 47,205 in expanded notation.	40,000 + 7,000 + 200 + 5
2	A base-ten model has 8 ten-thousand blocks, 1 thousand block, 6 hundred flats, 3 ten rods, and 9 ones. Write the number.	81,639
3	Write 90,070 as place-value parts. Tell how many ten thousands, thousands, hundreds, tens, and ones.	9 ten thousands, 0 thousands, 0 hundreds, 7 tens, 0 ones
4	Write the number made by 5 ten thousands, 2 thousands, 0 hundreds, 4 tens, and 6 ones.	52,046
5	Fill in the blank: $70,000 + \underline{\hspace{1cm}} + 300 + 20 + 1 = 73,321$	3,000
6	Write 18,509 in two ways: expanded notation and place-value parts.	10,000 + 8,000 + 500 + 9; 1 ten thousand, 8 thousands, 5 hundreds, 0 tens, 9 ones

PART 2 • APPLY IT

1. **30,000 + 4,000 + 200 + 8** The digits show 3 ten thousands, 4 thousands, 2 hundreds, 0 tens, and 8 ones. Add the value of each nonzero digit.
2. **79,504** Put each amount in its place-value position. The number has 7 in the ten-thousands place, 9 in the thousands place, 5 in the hundreds place, 0 in the tens place, and 4 in the ones place.

CHALLENGE

44,263. The number has 2 hundreds, so twice as many thousands is 4 thousands.

Accept expanded notation that includes zero-value addends, such as + 0 tens, or leaves them out. Accept equivalent place-value wording, such as 6 groups of ten thousand.