

Place Value Power

Build numbers and break them apart.

GRADE 4 • TEKS 4.2.B

4.2.B “represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals;”

NAME _____

DATE _____

PLACE VALUE PARTS

Each digit has a value based on its place. In expanded notation, write the value of each nonzero digit as an addition sentence. To write a numeral, put each digit in the place named.

WORKED EXAMPLE

Write 406,070,008.05 in expanded notation.

1. The 4 is worth 400,000,000 and the 6 is worth 6,000,000.
2. The 7 is worth 70,000, the 8 is worth 8, and the 5 is worth 0.05.
3. Add the values of the nonzero digits.

Answer: $400,000,000 + 6,000,000 + 70,000 + 8 + 0.05$

PRACTICE 6 problems

1 Write 73,405,019 in expanded notation.

ANSWER _____

2 Write this expanded notation as a numeral:
 $800,000,000 + 20,000,000 + 900,000 + 4,000 + 60 + 2$

ANSWER _____

3 Write 58.37 in expanded notation.

ANSWER _____

4 Write this expanded notation as a numeral:
 $9,000,000 + 300,000 + 20,000 + 700 + 4 + 0.6 + 0.02$

ANSWER _____

5 Write 605,040,090.08 in expanded notation.

ANSWER _____

6 Write this expanded notation as a numeral:
 $100,000,000 + 7,000,000 + 300,000 + 5,000 + 40 + 0.90$

ANSWER _____

APPLY IT Show your work

- 1** A wildlife video has 305,040,070 views. Write the number of views in expanded notation.

WORK SPACE

ANSWER _____

- 2** A smoothie at the school festival costs $7 + 0.4 + 0.06$ dollars. Write the price as a numeral.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A number has 8 in the hundred millions place, 2 in the millions place, 4 in the ten thousands place, 9 in the hundreds place, 3 in the ones place, 6 in the tenths place, and 1 in the hundredths place. Write the numeral and its expanded notation.

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Write 73,405,019 in expanded notation.	70,000,000 + 3,000,000 + 400,000 + 5,000 + 10 + 9
2	Write this expanded notation as a numeral: 800,000,000 + 20,000,000 + 900,000 + 4,000 + 60 + 2	820,904,062
3	Write 58.37 in expanded notation.	50 + 8 + 0.3 + 0.07
4	Write this expanded notation as a numeral: 9,000,000 + 300,000 + 20,000 + 700 + 4 + 0.6 + 0.02	9,320,704.62
5	Write 605,040,090.08 in expanded notation.	600,000,000 + 5,000,000 + 40,000 + 90 + 0.08
6	Write this expanded notation as a numeral: 100,000,000 + 7,000,000 + 300,000 + 5,000 + 40 + 0.90	107,305,040.90

PART 2 • APPLY IT

- 300,000,000 + 5,000,000 + 40,000 + 70** Write the value of each nonzero digit: 3 hundred millions, 5 millions, 4 ten thousands, and 7 tens.
- 7.46** Put 7 in the ones place, 4 in the tenths place, and 6 in the hundredths place.

CHALLENGE

802,040,903.61; 800,000,000 + 2,000,000 + 40,000 + 900 + 3 + 0.6 + 0.01

Accept equivalent expanded forms that include zero-value terms or omit them. Accept 107,305,040.9 as equivalent to 107,305,040.90.