

Decimal Place Power

Show each digit's value through the thousandths.

GRADE 5 • TEKS 5.2.A

5.2.A "represent the value of the digit in decimals through the thousandths using expanded notation and numerals;"

NAME _____

DATE _____

BUILD THE DECIMAL

Each digit has a value based on its place. To write expanded notation, add the value of each nonzero digit, using tenths, hundredths, and thousandths places.

WORKED EXAMPLE

Write 6.482 in expanded notation.

1. 6 is in the ones place, so its value is 6.
2. 4 is in the tenths place, so its value is 0.4.
3. 8 is in the hundredths place and 2 is in the thousandths place, so their values are 0.08 and 0.002.
4. Add the place values.

Answer: $6 + 0.4 + 0.08 + 0.002$

PRACTICE 6 problems

1 Write 3.709 in expanded notation.

ANSWER _____

2 Write $8 + 0.05 + 0.006$ as a decimal numeral.

ANSWER _____

3 What is the value of the digit 4 in 2.417?

ANSWER _____

4 What is the value of the digit 8 in 0.386?

ANSWER _____

5 Write $14 + 0.2 + 0.03 + 0.005$ as a decimal numeral.

ANSWER _____

6 Write 9.120 in expanded notation.

ANSWER _____

APPLY IT Show your work

- 1** At an esports club, Jordan recorded a reaction time of 18.407 seconds. Write the time in expanded notation. What is the value of the digit 4?

WORK SPACE

ANSWER _____

- 2** An animal shelter's online video received $7 + 0.2 + 0.03 + 0.004$ million views. Write this number as a decimal numeral. What is the value of the digit 3?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Sam says that $5 + 0.08 + 0.004$ equals 5.84. Is Sam correct? Explain your reasoning and write the correct decimal numeral.

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Write 3.709 in expanded notation.	$3 + 0.7 + 0.009$
2	Write $8 + 0.05 + 0.006$ as a decimal numeral.	8.056
3	What is the value of the digit 4 in 2.417?	0.4
4	What is the value of the digit 8 in 0.386?	0.08
5	Write $14 + 0.2 + 0.03 + 0.005$ as a decimal numeral.	14.235
6	Write 9.120 in expanded notation.	$9 + 0.1 + 0.02$

PART 2 • APPLY IT

- $18 + 0.4 + 0.007$; 0.4** The 18 is the whole-number part. The 4 is in the tenths place, and the 7 is in the thousandths place.
- 7.234 ; 0.03** Put each addend into its matching place in the decimal numeral. The 3 is in the hundredths place.

CHALLENGE

No. The correct numeral is 5.084 because 0.08 is 8 hundredths and 0.004 is 4 thousandths.

Accept equivalent expanded forms that include zero-value terms, such as $3 + 0.7 + 0.00 + 0.009$. Accept decimals written with trailing zeros when the value is unchanged.