

Expanded Form Worksheets Answer Key PDF

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Part 1: Building a Foundation

What is the primary purpose of writing a number in expanded form?

undefined. A) To simplify calculations

undefined. B) To show the value of each digit ✓

undefined. C) To convert numbers into fractions

undefined. D) To solve equations

The primary purpose of writing a number in expanded form is to show the value of each digit.

Which of the following are components of expanded form for whole numbers? (Select all that apply)

undefined. A) Units ✓

undefined. B) Tenths

undefined. C) Hundreds ✓

undefined. D) Thousandths

Components of expanded form for whole numbers include units, hundreds, and thousands.

Define expanded form in your own words and explain why it is useful in mathematics.

Expanded form is a way of writing numbers that shows the value of each digit. It is useful for understanding place value and performing calculations.

List the steps to convert the number 456 into expanded form.

1. Step 1

Identify the hundreds place: 400.

2. Step 2

Identify the tens place: 50.

3. Step 3

Identify the ones place: 6.

To convert 456 into expanded form, identify the value of each digit: $400 + 50 + 6$.

Part 2: Understanding and Interpretation

Which of the following numbers is correctly written in expanded form?

undefined. A) $700 + 50 + 6$ ✓

undefined. B) $7 + 50 + 600$

undefined. C) $70 + 500 + 6$

undefined. D) $7000 + 500 + 60$

The correct expanded form representation is $700 + 50 + 6$.

When writing the decimal 3.47 in expanded form, which of the following components are included? (Select all that apply)

undefined. A) 3 ✓

undefined. B) 0.4 ✓

undefined. C) 0.07 ✓

undefined. D) 0.007

The components included in the expanded form of 3.47 are 3, 0.4, and 0.07.

Explain how expanded form helps in understanding the place value of digits in a number.

Expanded form illustrates the value of each digit based on its position, making it easier to understand place value.

Part 3: Application and Analysis

If the number 982 is written in expanded form, which of the following represents the hundreds place?

- undefined. A) 9
- undefined. B) 90
- undefined. C) 900 ✓**
- undefined. D) 9000

The hundreds place in the number 982 is represented by 900.

Convert the number 5.23 into expanded form. Which of the following expressions are correct? (Select all that apply)

- undefined. A) $5 + 0.2 + 0.03$ ✓**
- undefined. B) $5 + 0.20 + 0.03$ ✓**
- undefined. C) $5 + 0.23$
- undefined. D) $5.2 + 0.03$

The correct expressions for the expanded form of 5.23 are $5 + 0.2 + 0.03$ and $5 + 0.20 + 0.03$.

Write the number 1,234 in expanded form and explain each step in your process.

The expanded form of 1,234 is $1,000 + 200 + 30 + 4$, and each step involves identifying the value of each digit.

Which statement best describes the relationship between expanded form and place value?

- undefined. A) Expanded form ignores place value.
- undefined. B) Expanded form highlights the importance of place value. ✓**
- undefined. C) Expanded form only applies to whole numbers.
- undefined. D) Expanded form simplifies place value.

Expanded form highlights the importance of place value by showing the value of each digit.

Part 4: Evaluation and Creation

Which of the following numbers, when written in expanded form, would include the term 0.06?

undefined. A) 4.6

undefined. B) 4.06 ✓

undefined. C) 4.60

undefined. D) 4.006

The number 4.06, when written in expanded form, includes the term 0.06.

Evaluate the expanded form of 9,304. Which of the following are correct components? (Select all that apply)

undefined. A) 9,000 ✓

undefined. B) 300 ✓

undefined. C) 4 ✓

undefined. D) 40

The correct components of the expanded form of 9,304 are 9,000, 300, and 4.

Create a real-world scenario where understanding and using expanded form would be beneficial. Explain your reasoning and how expanded form would be applied.

A real-world scenario could involve budgeting, where expanded form helps in understanding the value of each digit in amounts.

Reflect on how learning about expanded form has changed your understanding of numbers and their values. Provide examples to support your reflection.

Learning about expanded form enhances understanding of numbers by clarifying the value of each digit, leading to better mathematical comprehension.