

Problem Solving Recording Sheet

Grade Level: 3rd Grade	Day #:	Name:
Grading Period: 1st Quarter	Unit Name: Place Value	Pacing: Minutes
Lesson Concept: Compose and decompose numbers up to 999,999		
Vocabulary: digit, numeral, place value, period, standard form, expanded form, word/written form, ones, tens, hundreds, thousands, ten thousands, hundred thousands, whole number, value, sum, partitioning		Materials: base-ten blocks, place value chart
Reporting Category: 1	(Readiness or New) TEKS: 3.1A and B	

Think-Aloud #1

John saves pennies. When he counted, he found he had saved 213 pennies. Identify the place value of each of each digit and write the number in expanded form and in words?

Strategy 1: Use Base Ten Blocks

Build a model of the number using base-ten blocks and sketch the model.

Strategy 2: Use a Place Value Chart

A place value chart is a _____ that can be used to find the _____ based on its _____.

- Label the PV Chart.
- Write the digits of 213 on the PV chart to identify the place value of each digit.

Expanded Form: _____

Word/Written Form: _____

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Think-Aloud # 2

Casey wrote a four-digit number with a 1 in the thousands place, a 2 in the hundreds place, and a 4 in the ones place. What could be Casey's number?

Strategy 1: Use Base Ten Blocks

Build a model of the number using base-ten blocks and sketch the model below.

Strategy 2: Use a Place Value Chart

- Label the PV Chart.
- Write the digits of your number on the PV chart.

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Standard Form: _____

Expanded Form: _____

Word/Written Form: _____

Explain how to write a standard numeral in words. _____

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Think-Aloud # 3 Guided Problem Solving

Ron climbed a mountain that was four thousand, three hundred sixty-one feet high. How can the number be represented in standard form and expanded form?

What are the important words in the question? _____

What are the important details that are needed to answer the question? _____

What strategy will help to find the answer? _____

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My strategy and work is shown. Yes No

Standard Form _____ Expanded Form _____

Think-Aloud # 4 Guided Problem Solving (Show a problem-solving process.)

Look at the expanded form below.

$$400,000 + 3,000 + 700 + 60 + 2?$$

What standard form and word form means the same?

Think-Aloud # 5 Guided Problem Solving (Show a problem-solving process.)

How is the numeral 540,207 written in words?

- A. Fifty-four thousand, two hundred seven
- B. Five hundred forty thousand, five seventy
- C. Five thousand, four hundred seven
- D. Five hundred forty thousand, two hundred seven

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Extra practice pages can be found:

Mentoring Minds – pgs. 7 -10

Shoulder Partner Practice

Use a problem-solving process.

1. There were 17,856 people living in Eastwood in 2009. What is the value of the digit 8 in 17,856?

2. The table below shows the population of three cities in the United States.

City Populations	
City	Number of People
Austin, TX	681,804
Jacksonville, FL	777,704
Columbus, OH	730,008

Which of the following statements is NOT true?

- A. The population of Austin has an 8 in the thousands place.
 - B. The population of Columbus in words is seven hundred thirty thousand eight.
 - C. The expanded form of the population of Jacksonville is $777,000 + 700 + 40$.
 - D. The population of Columbus has a 7 in the ten thousands place.
3. Marcus and Lou are math partners. Marcus wrote a mystery number. He gave the clues below to help Lou find the mystery number.
 - The number has 4 digits.
 - The value of one of the digits is 600.
 - The number in the tens place is 2 less than the digit in the hundreds place.
 - The number in the ones place is an odd number less than three.
 - The sum of the digits is 16.

What is the mystery number?

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Independent Practice

Use a problem solving process.

1. The Guadalupe River 642,518 yards long. Which of the following has the same value as 642,518?

- A. $600,000 + 40,000 + 2,000 + 500 + 10 + 8$
- B. $600,000 + 4,000 + 200 + 10 + 8$
- C. $60,000 + 40,000 + 2,000 + 500 + 10 + 8$
- D. $64,000 + 2,000 + 500 + 10 + 8$

2. How is the number 359,250 written in words?

- A. Three hundred fifty-nine, two hundred fifty.
- B. Three thousand fifty-nine, two hundred fifty.
- C. Three fifty-nine thousand, two hundred fifty.
- D. Three hundred fifty-nine thousand, two hundred fifty.

3. What number means the same as $70,000 + 200 + 8$?

- A. 728
- B. 7,028
- C. 70,208
- D. 72,008

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Homework Practice

Use a problem solving process.

1. Which number means the same as three hundred five thousand, four hundred three?

- A. 3,543
- B. 503,204
- C. 305,403
- D. 35,304

2. The total population of Sequin, San Antonio, and New Braunfels is 132,210 people. How is this number written in expanded form?

- A. $100,000 + 3,000 + 2,000 + 200 + 10$
- B. $100,000 + 30,000 + 2,000 + 200 + 10$
- C. $100,000 + 30,000 + 2 + 200 + 10$
- D. $10,000 + 3,000 + 200 + 20 + 1$

3. Which would you rather have, nine \$100 bills or nine hundred \$1 bills? Justify your answer.
