2(2) Number and operations. The student applies mathematical process standards to understand how to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value.	**2(2)(A)** The student is expected to use concrete and pictorial models to compose and decompose numbers up to 1,200 in more than one way as a sum of so many thousands, hundreds, tens, and ones.

Materials

- Base-ten blocks (20 flats, 20 rods, and 20 units)

Procedure:

Student will use base-ten blocks to represent a given number in more than one way.

Use the base-ten blocks to represent the number 427.

- **What is the value of the hundreds? Tens? Ones?**
- **What is the combined value of the hundreds, tens and ones?**

Use the base-ten blocks to represent the number 427 in a different way.

- **What is the value of the hundreds? Tens? Ones?**
- **What is the combined value of the hundreds, tens and ones?**

Repeat using the number 219
Repeat this task with other numbers as needed.

Check Student's Responses:

Represented 427 using _____ hundreds _____ tens _____ ones

Composed/decomposed 427 using _____ hundreds _____ tens _____ ones

□ Correctly described the value of the hundreds, tens, and ones
□ Incorrectly described the value of the hundreds, tens, and ones

Represented 219 using _____ hundreds _____ tens _____ ones

Composed/decomposed 219 using _____ hundreds _____ tens _____ ones

□ Correctly described the value of the hundreds, tens, and ones
□ Incorrectly described the value of the hundreds, tens, and ones

Notes:

2(2)(A) The student is expected to use concrete and pictorial models to compose and decompose numbers up to 1,200 in more than one way as a sum of so many thousands, hundreds, tens, and ones.	**Possible interpretations, issues to follow up on, and implications for teaching**

What did you observe?

- The student **correctly represented the number.** This student may be ready to represent larger numbers up to 1,200.

- The student **incorrectly represented the number.** This student may need more practice representing numbers and describing the value of the objects in each place value position. Observe to make sure the student is counting the correct number of base-ten block pieces for each of the hundreds, tens, and ones and is arranging the base-ten blocks from left to right.

- The student **correctly composed/decomposed the number.** This student may be ready to compose and decompose larger numbers up to 1,200 in multiple ways.

- The student **incorrectly composed/decomposed the number.** This student may need more practice composing and decomposing numbers using concrete models.

  A teaching strategy might include asking the student to represent the number 183. Prompt the student to describe the value of the hundreds, tens, and ones (100, 80, and 3). Ask, "What is the combined value of 1 hundred, 8 tens and 3 ones? Prompt the student to decompose one of the tens into 10 ones then describe the new value of the hundred, tens and ones (100, 70, and 13). Ask, "What is the combined value of the 1 hundred, 7 tens and 13 ones?" Ask, "What was the total value of both of these representations?" Explain to the student that the value of the sets are the same because they simply decomposed 1 ten into 10 ones without adding or taking away any additional base-ten blocks.

2(2) Number and operations. The student applies mathematical process standards to understand how to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value.	**2(2)(B)** The student is expected to use standard, word, and expanded forms to represent numbers up to 1,200.

Materials

- Paper and pencil

Procedure:

Prompt the student to use standard, word, and expanded form to represent numbers such as 1,023; 985; and 740.

I am going to tell you a number, and I would like you to:

- **Write the standard form of the number _____.**
- **Write the word form of the number _____.**
- **Write the expanded form of the number _____.**

Repeat for other numbers as needed.

Check Student's Responses:

For the number _____, the student correctly wrote the following:
□ Standard form □ Word form □ Expanded form

The student incorrectly wrote:

For the number _____, the student correctly wrote the following:
□ Standard form □ Word form □ Expanded form

The student incorrectly wrote:

For the number _____, the student correctly wrote the following:
Standard form □ Word form □ Expanded form

The student incorrectly wrote:

Notes:

2(2)(B) The student is expected to use standard, word, and expanded forms to represent numbers up to 1,200.	**Possible interpretations, issues to follow up on, and implications for teaching**

What did you observe?

- The student **correctly represented the number using standard form, word form, and expanded form.** This student may be ready to compare and order whole numbers.

- The student **incorrectly represented the number using standard form.** Consider whether the student reversed the digit in the hundreds, tens, and/or ones place or as a result of the misrepresentation of the number.

  A teaching strategy for reversing the digits might include asking the student to say the number they have recorded out loud.

- The student **incorrectly represented the number using word form.** Consider the reason behind the incorrect word representation; was it because of unknown spelling or place value.

  A teaching strategy for the student struggling with word form may include provide the student was a word bank such as hundred, twenty, seventy, eighty, etc. For place value, it might be helpful to have the student record the digits of the number in a place value chart then ask the student to say the number out loud.

- The student **incorrectly represented the number using expanded form.**

  A teaching strategy might include asking the student to use skip counting and counting to determine the value of each place and to record the value.

2(2) Number and operations. The student applies mathematical process standards to understand how to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value.	**2(2)(D)** The student is expected to use place value to **compare** and order whole numbers up to 1,200 using comparative language, numbers, and symbols (>,<, or =).

Materials

- Paper and pencil

Procedure:

Record and display two numbers between 0 and 1,200 (e.g., 405 and 450; 676 and 767; 1,031 and 1,041; 229 and 229).

Record the less than, greater than, or equal to symbol to describe the relationship between these two numbers.
Justify your answer.

Repeat this task with other numbers as needed.

Check Student's Responses:	**Check Student's Strategies:**
1. Numbers _____ and _____ **Responses:** □ Correct □ Incorrect **Symbol:** □ Correct □ Incorrect	The student: □ Used place value to compare □ Compared digits without reference to the place value □ Other:
2. Numbers _____ and _____ **Responses:** □ Correct □ Incorrect **Symbol:** □ Correct □ Incorrect	The student: □ Used place value to compare □ Compared digits without reference to the place value □ Other:
3. Numbers _____ and _____ **Responses:** □ Correct □ Incorrect **Symbol:** □ Correct □ Incorrect	The student: □ Used place value to compare □ Compared digits without reference to the place value □ Other:

2(2)(D) The student is expected to use place value to compare and order whole numbers up to 1,200 using comparative language, numbers, and symbols (>,<, or =).	**Possible interpretations, issues to follow up on, and implications for teaching**

What did you observe?

- The student **correctly compared the numbers using the comparison symbol.** This student may be ready to compare and order three whole numbers.

- The student **correctly compared the two numbers but compared the digits without reference to the place value.** This student may need additional questioning such as, "What is the value of [one of the digits in the numbers]?"

- The student **correctly compared the numbers but incorrectly used the comparison symbol.** The student may need practice connecting comparison language to the symbol.

- The student **incorrectly compared the numbers using the comparison symbol.** If the student is struggling with comparing numbers, the student may need additional time using concrete or pictorial models to compare numbers.

  A teaching strategy might include asking the student to use base ten blocks to represent two numbers. Prompt the student to compare the number of hundreds, tens, and ones, as appropriate, in each set by asking, "How many tens are represented in each set? What is the value of these tens?"

2(2) Number and operations. The student applies mathematical process standards to understand how to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value.	**2(2)(D)** The student is expected to use place value to compare and **order** whole numbers up to 1,200 using comparative language, numbers, and symbols (>,<, or =).

Materials

- Number cards up to 1,200

Procedure:

Display three number card such as, 409, 705, 901; 676, 767, 776; 829, 843, 851. Prompt the student to use number cards to order numbers from least to greatest and greatest to least.

Place these numbers in order from least/greatest to greatest/least.
Justify your answer.

Repeat this task with other numbers as needed.

Record Student's Responses:

1. Numbers _____, _____, _____ least to greatest | greatest to least
   □ Correct □ Incorrect

2. Numbers _____, _____, _____ least to greatest | greatest to least
   □ Correct □ Incorrect

3. Numbers _____, _____, _____ least to greatest | greatest to least
   □ Correct □ Incorrect

4. Numbers _____, _____, _____ least to greatest | greatest to least
   □ Correct □ Incorrect

Notes:

2(2)(D) The student is expected to use place value to compare and **order** whole numbers up to 1,200 using comparative language, numbers, and symbols (>,<, or =).	**Possible interpretations, issues to follow up on, and implications for teaching**

What did you observe?

- The student **correctly ordered the numbers.** This student may be ready to order whole numbers with larger values.

- The student **incorrectly ordered the numbers.** The student may need additional time using concrete or pictorial models to compare and order numbers. Additionally, if the student is able to correctly compare two numbers, he or she may simply need more practice comparing and ordering three numbers.

  A teaching strategy might include asking the student to compare and order numbers that vary by the digit in the hundreds place (129, 229, 529). This will encourage the student to pay attention to the value of the digit in the hundreds place.

2(2) Number and operations. The student applies mathematical process standards to understand how to represent and compare whole numbers, the relative position and magnitude of whole numbers, and relationships within the numeration system related to place value.	**2(2)(E)** The student is expected to locate the position of a given whole number on an open number line.

Materials

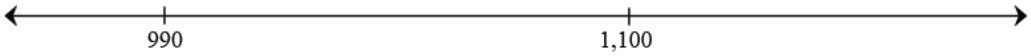
- Pencil

Procedure:

Prompt the student to place the given number on the open number line.

1. **Place the number 387 on the open number line. Explain your thinking.**

2. **Place the number 998 on the open number line. Explain your thinking.**



3. **Place the number 525 on the open number line. Explain your thinking.**

Repeat this task with other numbers as needed.

Check Student's Responses:	**Check Student's Strategies:**
1. □ Correct □ Incorrect	1. □ Used relative position and magnitude □ Used place value relationships □ Other:
2. □ Correct □ Incorrect	2. □ Used relative position and magnitude □ Used place value relationships □ Other:
3. □ Correct □ Incorrect	3. □ Used relative position and magnitude □ Used place value relationships □ Other:

Notes:

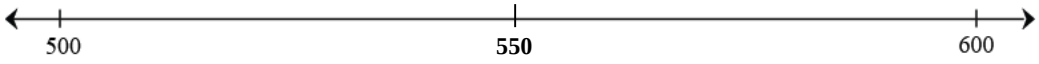
2(2)(E) The student is expected to locate the position of a given whole number on an open number line.	**Possible interpretations, issues to follow up on, and implications for teaching**

What did you observe?

- The student **correctly located the relative position of the numbers.** This student should be able to explain how he or she used the relative position and magnitude of whole numbers or used place value to locate the positon of the numbers.

- The student **incorrectly located the position of the numbers.** Consider where and how the student placed the numbers on the open number line:
  - Did the student place the given number in the middle of the two marked numbers?
  - Did the student demonstrate incorrect use of the relationship between numbers such as incorrectly determining the closest number?

  A teaching strategy might include asking the student to identify benchmark numbers on the open number line before placing the number on the open number line. For example, identifying the middle of two numbers, identifying intervals of ten, fifty, etc. Be careful not to over use interval marks. The purpose of this student expectation is to encourage the student to use an understanding of magnitude and/or the relationship among numbers to locate positions on an open number line.



2(3) Number and operations. The student applies mathematical process standards to recognize and represent fractional units and communicates how they are used to name parts of a whole.	**2(3)(A)** The student is expected to partition objects into equal parts and name the parts, including halves, fourths, and eighths, using words.

Materials

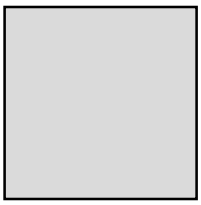
- Pencil

Procedure:

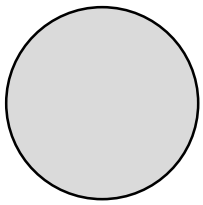
Prompt the student to draw lines to partition the shapes below into halves, fourths, or eighths.

1. **Partition this shape into two equal parts. What is the name of these parts?**

2. **Partition this shape into eight equal parts. What is the name of these parts?**



3. **Partition this shape into four equal parts. What is the name of these parts?**



Check Student's Responses:

1. Partitioned the shape into_____ □ Equal parts □ Unequal parts Identified the parts: □ Correctly as halves □ Incorrectly as _____ 2. Partitioned the shape into _____ □ Equal parts □ Unequal parts Identified the parts: □ Correctly as eighths □ Incorrectly as _____ 3. Partitioned the shape into _____ □ Equal parts □ Unequal parts Identified the parts: □ Correctly as fourths □ Incorrectly as _____	**Notes:**

2(3)(A) The student is expected to partition objects into equal parts and name the parts, including halves, fourths, and eighths, using words.	**Possible interpretations, issues to follow up on, and implications for teaching**

What did you observe?

- The student **correctly partitioned the shapes into equal parts and correctly identified the parts as halves, eighths, and fourths.** Provide this student with the opportunity to partition various strips, number lines, and different polygons.

- The student **incorrectly partitioned the shapes into equal parts.** This student might benefit from partition shapes using concrete models such as a geoboard or paper folding.

  A teaching strategy might include asking the student to create a polygon on a geo-board with a rubber band. Prompt the student to use additional rubber bands to partition the shape into halves, fourths, or eighths. Prompt the student to count the number of equal parts and identify the name of the parts.

- The student **incorrectly identified the parts as halves, eighths, and fourths.** This student might benefit from a work bank with words halves, eighths, and fourths to help them name the parts. Additionally, it may be beneficial to assist the student in counting the number of parts before selecting the appropriate name from the word bank.

2(3) Number and operations. The student applies mathematical process standards to recognize and represent fractional units and communicates how they are used to name parts of a whole.	**2(3)(B)** The student is expected to explain that the more fractional parts used to make a whole, the smaller the part; and the fewer the fractional parts, the larger the part.

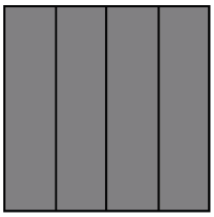
Materials

- None needed

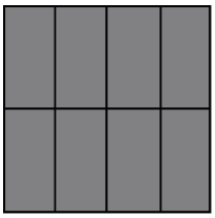
Procedure:

Prompt the student to compare the sets of fraction models below.

1. **Compare Fraction A and Fraction B. Which fraction needs the fewest number of fractional parts to equal the whole? Why?**



Fraction A



Fraction B

2. **Compare the fractional part of Fraction C and Fraction D. Which fraction needs the greatest number of fractional parts to equal the whole? Why?**

Fraction C

Fraction D

Check Student's Responses:

1. Identified the fraction with the least number of parts: □ Correct □ Incorrect Explanation: □ Correct □ Incorrect 2. Identified the fraction with the great number of parts: □ Correct □ Incorrect Explanation: □ Correct □ Incorrect	**Notes:**

2(3)(B) The student is expected to explain that the more fractional parts used to make a whole, the smaller the part; and the fewer the fractional parts, the larger the part.	**Possible interpretations, issues to follow up on, and implications for teaching**

What did you observe?

- The student **correctly identified the fraction model with the greatest and least number of parts.** You may want to ask the student to name the fractional parts of the model.

- The student **incorrectly identified the fraction model with the greatest and least number of parts and/or provided an incorrect explanation(s).** It may be necessary to support the student through a teaching activity. Once the teaching activity is complete, prompt the student to repeat the activity using two new fraction models.

  A teaching strategy might include asking the student to count and number the fractional parts on each model. Ask the student the following questions:
  - *Which fraction has the greatest number of parts?*
  - *What do you notice about the size of the parts from this fraction model as compared to the other fraction model?*
  - *Which fraction has the smallest number of parts?*
  - *What do you notice about the size of the parts from this fraction model as compared to the other fraction model?*

2(3) Number and operations. The student applies mathematical process standards to recognize and represent fractional units and communicates how they are used to name parts of a whole.	**2(3)(D)** The student is expected to identify examples and non-examples of halves, fourths, and eighths.

Materials

- Fraction Cards

Procedure:
Show the student one Fraction Card at a time and ask him or her to identify the model as an example or non-example. Prompt the student to identify halves, fourths, and eighths.

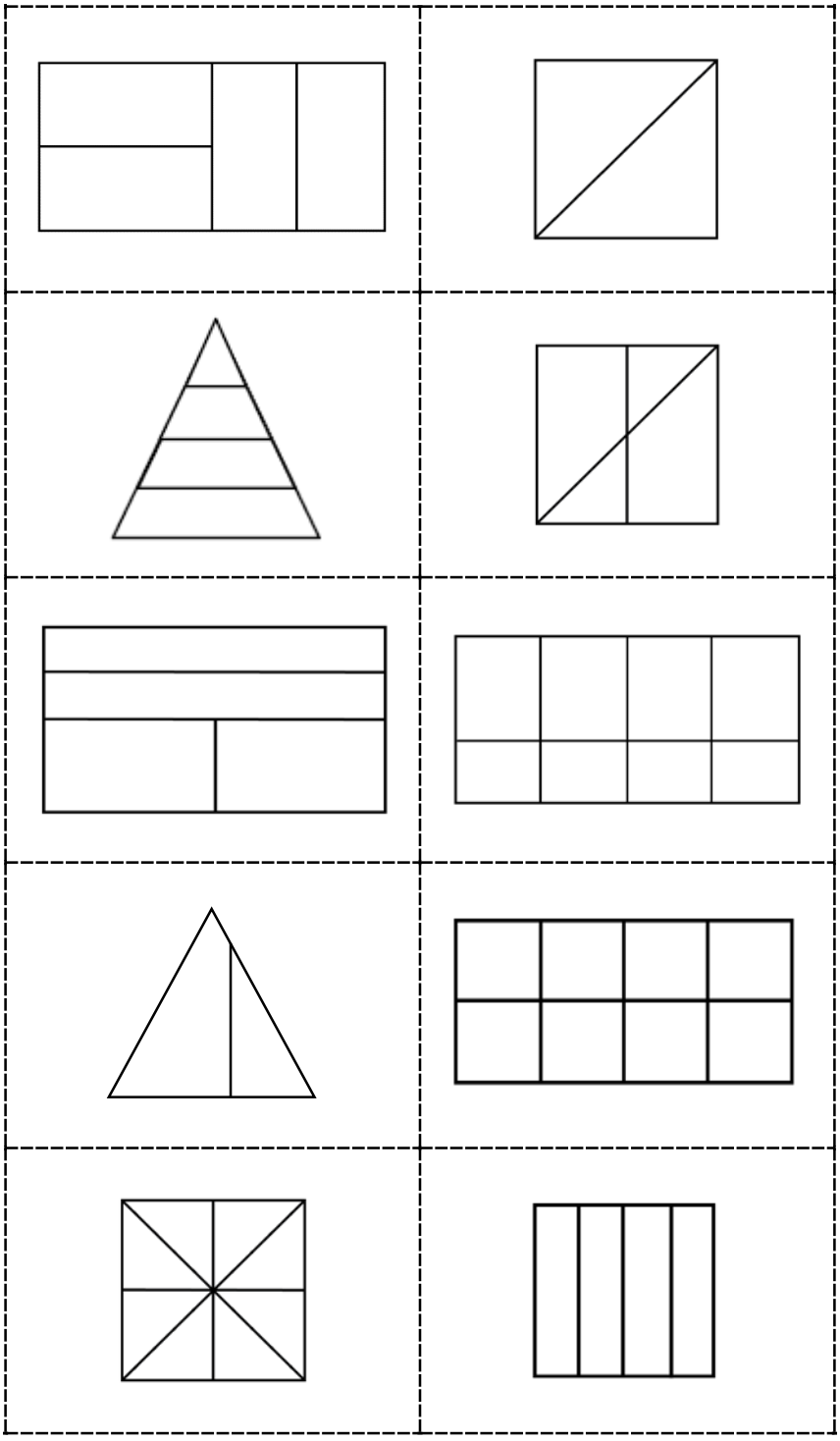
Is this model an example or non-example of halves, fourths, or eighths?
Why or why not?

If so, which fraction (halves, fourths, or eighths) does this model represent?

Repeat as necessary.

Check Student's Responses:	
1. Identified the fraction model as: □ An example of _____ □ Non-example 2. Identified the fraction model as: □ An example of _____ □ Non-example 3. Identified the fraction model as: □ An example of _____ □ Non-example 4. Identified the fraction model as: □ An example of _____ □ Non-example 5. Identified the fraction model as: □ An example of _____ □ Non-example	**Notes:**

Fraction Cards



2(3)(D) The student is expected to identify examples and non-examples of halves, fourths, and eighths.	**Possible interpretations, issues to follow up on, and implications for teaching**

What did you observe?

- The student **correctly identified the examples and non-examples and identified the parts as halves, eighths, and fourths.** Provide this student with the opportunity to identify various examples and non-examples of other models such as strips, number lines, and different polygons.

- The student **only identified examples of fractions with congruent parts.** Provide this student with the opportunity to discover that fractions need not be congruent to be equal (they may have the same area).

  A teaching strategy might include asking the student to fold two pieces of paper in half: one with a vertical fold and one with a horizontal fold. Prompt the student to cut the paper with the vertical fold along the fold (in half). Prompt the student to fold one of the halves in half and cut along the fold. Prompt the student to place the two pieces, which make the half of the whole piece of paper, on top of the half of the paper that was folded horizontally. Debrief the activity using question such as:
  - *When you folded the each piece of paper, which fraction did you represent?*
  - *Did the halves on the two pieces of paper look the same? Are these both halves since they did not look alike?*
  - *What happened when you cut one of the halves and covered one of the halves on the other piece of paper?*

2(4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve addition and subtraction problems with efficiency and accuracy.	**2(4)(A)** The student is expected to recall basic facts to add and subtract within 20 with automaticity.

Materials

- None needed.

Procedure:

Ask the student apply basic facts to solve the following word problems.

1. **Jack had 7 books on the bookshelf. He put 8 more books on the bookshelf this morning. How many books are on Jack's bookshelf?**
2. **Maria had 18 pencils. She gave 9 pencils to her teacher. How many pencils does Maria still have?**
3. **There were 14 children on the bus. Some children got off the bus at the first stop. Now there are 6 children on the bus. How many children got off the bus at the first bus stop?**
4. **There were some cars in the parking lot. Five more cars pulled in. Now there are 11 cars in the parking lot. How many cars were in the parking lot at the start?**

Check Student's Responses:	**Check Student's Strategies:**
1. □ Correct □ Incorrect: _____ 2. □ Correct □ Incorrect: _____ 3. □ Correct □ Incorrect: _____ 4. □ Correct □ Incorrect: _____	1. □ Automaticity □ Other: 2. □ Automaticity □ Other: 3. □ Automaticity □ Other: 4. □ Automaticity □ Other:

Notes:

2(4)(A) The student is expected to recall basic facts to add and subtract within 20 with automaticity.	**Possible interpretations, issues to follow up on, and implications for teaching**

What did you observe?

- The student **correctly solved the problems with automaticity.** This student is likely to interpret and solve other one-step problems successfully. The student is most likely ready to begin solving multi-step problems with larger numbers.

- The student **incorrectly solved some of the problems.** It is important to assess whether the student is struggling with the mathematics, the interpretation of the story problem, or computation. If the student correctly solved question one and question two, the student might struggle applying his or her understanding to problems that may be solved using either addition or subtraction such as question three and question four.

  A teaching strategy might include asking the student to solve additional problems where the unknown is located in various positions. For example:
  - *There were 6 flowers in the vase. Ms. Jones places some more in the vase. Now there are 12 flowers in the vase. How many flowers did Ms. Jones place in the vase?*
  - *There were some people in the park. Four people went home. Now there are 8 people in the park. How many people were in the park at the start?*

  To gain additional insight, ask the student to justify his or her answer and/or explain how they arrived at the solution.

- The student **incorrectly solved most of the problems and/or was not able to solve the problems with automaticity.** It is important to determine the strategy(s) used to determine the solution. Consider whether the student used a counting strategy or used his or her fingers.

  A teaching strategy might be to include providing the student with more efficient fact strategies such as making a ten. It may be necessary to use counters and ten-frames to help the student visualize the make ten strategy.

2(5) Number and operations. The student applies mathematical process standards to determine the value of coins in order to solve monetary transactions.	**2(5)(A)** The student is expected to determine the value of a collection of coins up to one dollar. **2(5)(B)** The student is expected to use the cent symbol, dollar sign, and the decimal point to name the value of a collection of coins.

Materials

- Coins or pictures of coins (4 quarters, 10 dimes, 10 nickels, 10 pennies)
- Paper and pencil

Procedure:
Show the student a collection of mixed coins up to one dollar. Prompt the student to record the value of the coins using the cent symbol, dollar sign, and decimal point (as appropriate).

What is the value of the set of coins?
Record the value of the coins using the cent symbol or the dollar sign and decimal point.

Repeat as needed.

Check Student's Responses:	**Check Student's Strategies:**
1. Determined the value: □ Correct □ Incorrect Recorded the value: □ Correct _____ □ Incorrect _____	The student: □ Used counting and/or skip-counting □ Began counting with the largest value
2. Determined the value: □ Correct □ Incorrect Recorded the value: □ Correct _____ □ Incorrect _____	The student: □ Used counting and/or skip-counting □ Began counting with the largest value
3. Determined the value: □ Correct □ Incorrect Recorded the value: □ Correct _____ □ Incorrect _____	The student: □ Used counting and/or skip-counting □ Began counting with the largest value

Notes:

2(5)(A) The student is expected to determine the value of a collection of coins up to one dollar. **2(5)(B)** The student is expected to use the cent symbols, dollar sign, and the decimal point to name the value of a collection of coins.	**Possible interpretations, issues to follow up on, and implications for teaching**

What did you observe?

- The student **correctly determined the value of coins and correctly recorded the written value.** This student may have the foundational skills necessary for third grade when students are asked to determine the value of coins and bills. If the student only used one way to record the value of the set of coins (cent symbol), prompt him or her to use the other symbols to record the value of the set of coins.

- The student **incorrectly determined the value of the coins.** Consider how he or she determined the value of the coins:
  - □ The student miscounted using skip-counting and/or counting on
  - □ The student incorrectly identified the value of a coin(s)

  A teaching strategy might include asking the student to identify the value of a set of the same coins to practice skip counting and counting on to determine the value of a set of coins. For example, prompt the student to use skip-counting by fives or tens to determine the value of the 6 nickels. Add 3 pennies to the set and ask the student to use counting on to determine the new value.

- The student **incorrectly recorded the value of the coins.** It may be helpful to provide the student with answer stems to model the correct use of symbols (____¢ or $_____._____).

2(7) Algebraic reasoning. The student applies mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships.	**2(7)(A)** The student is expected to determine whether a number up to 40 is even or odd using pairings of objects to represent the number.

Materials

- 40 counters (one-inch tiles, two-colored counters, etc.)

Procedure:
Place a set of counters near the student. Ask the student to grab different numbers of counters then pair the counters to determine whether the set of counters is even or odd.

Grab a handful of counters. How many counters did you grab?
Pair the counters.
Is the number _____ even or odd?

Repeat as necessary.

Check Student's Responses:

1. Number: _____ □ Odd □ Even 2. Number: _____ □ Odd □ Even 3. Number: _____ □ Odd □ Even 4. Number: _____ □ Odd □ Even	**Notes:**

2(7)(A) The student is expected to determine whether a number up to 40 is even or odd using pairings of objects to represent the number.	**Possible interpretations, issues to follow up on, and implications for teaching**

What did you observe?

- The student **correctly identified numbers as odd or even.** The student may be ready to determine whether a number is even or odd using more abstract tools such as the hundreds chart.

- The student **incorrectly identified numbers as odd or even.** This student may benefit from explicit instruction about the meaning of even and odd.

  A teaching strategy might include asking the student to pair a set of counters. Ask the student the following questions:
  - *Does every counter have a partner?*
    - *If yes, state "This number is even because when we place the counters in groups of two all of the counters have a partner."*
    - *If no, state, "This number is odd because when we place the counters in groups of two there is a counter left over or without a partner."*

2(8) Geometry and measurement. The student applies mathematical process standards to analyze attributes of two-dimensional shapes and three-dimensional solids to develop generalizations about their properties.	**2(8)(B)** The student is expected to classify and sort three-dimensional solids including spheres, cones, cylinders, rectangular prisms (including cubes as special rectangular prisms), and triangular prisms, based on attributes using formal geometric language.

Materials

- Three-dimensional solids

Procedure:

Place solids on table. Ask the question(s) below based on the three-dimensional solids displayed.

1. **Find the solid that has zero vertices and zero edges. What is the name of this solid?**
2. **A polyhedron is a solid that has all polygon faces. Which solids would belong in this group? Identify and describe the solids that are NOT in this group.**
3. **Sort the solids according to their attributes. Describe how you sorted the solids.**

Check Student's Responses:

1. The student identified the sphere:
   □ Correct □ Incorrect
2. The student identified the polyhedrons:
   □ Correct □ Incorrect
3. The student identified and described the other solids as: _____
4. The student sorted the shapes by: _____
   □ Correctly sorted the shapes □ Incorrectly sorted the shapes
5. The student described the group(s) as: _____

Notes:

2(8)(B) The student is expected to classify and sort three-dimensional solids including spheres, cones, cylinders, rectangular prisms (including cubes as special rectangular prisms), and triangular prisms, based on attributes using formal geometric language.	**Possible interpretations, issues to follow up on, and implications for teaching**

What did you observe?

- The student **classified and/or sorted the solids correctly.** It might be beneficial to see if this student is able to classify solids using other geometric language by asking questions such as, "Which of these solids are prisms?"

- The student **incorrectly classified and/or sorted the solids.** The student may need additional support in understanding vocabulary such as vertices, faces, edges, and a reminder of a definition of a polygon.

  A teaching strategy might include reviewing vocabulary followed by additional activities such as:
  - *Providing opportunities for the student to identify solids based on formal language such as:*
    - *Find all of the solids with 8 vertices.*
    - *Find all of the solids with a curved surface.*
  - *Prompt the student to draw a square. Explain that a square is a polygon with four equal sides. Prompt the student to determine which solid has only square faces (a cube). Next, prompt the student to find another solid they think might be a polyhedron. Prompt the student to describe each of the faces of the solid and determine whether or not each face of the solid is a polygon. Assist the student in identifying the solid if necessary.*

2(9) Geometry and measurement. The student applies mathematical process standards to select and use units to describe length, area, and time.	**2(9)(A)** The student is expected to find the length of objects using concrete models for standard units of length.

Materials

- Two strips of paper: one strip 6 inches in length and one strip 20 centimeters in length
- Concrete models such as one-inch tiles and centimeter cubes

Procedure:
Provide the student with the strips paper and corresponding measurement tools.

If one square tile is one inch, how many inches is this strip of paper?

If one cube is one centimeter, how many centimeters is this strip of paper?

Repeat using various lengths.

Check Student's Responses:	**Check Student's Strategies:**
1. Inches □ Correctly measures □ Incorrectly measures 2. Centimeters □ Correctly measures □ Incorrectly measures	The student: □ Places the tool end on end (iterates) □ Leaves spaces when iterating □ Other:

Notes:

2(9)(A) The student is expected to find the length of objects using concrete models for standard units of length.	**Possible interpretations, issues to follow up on, and implications for teaching**

What did you observe?

- The student **correctly measured the strips of paper.** The student may be ready to make connections between the inch tiles and an inch ruler and the centimeter cubes and a centimeter rule.

  A teaching strategy might include placing the appropriate ruler on a strip of paper and asking the student to place the inch tiles or centimeters cubes above the ruler. Ask questions such as, "You measured the paper to be 6 inch tiles in length, how many inches is this strip of paper in length?"

- The student **incorrectly measured the strips of paper.** The student may not understand that the measuring tools need to be laid end to end without any gaps or overlaps. The student may need more experience measuring with concrete objects before moving to using a ruler. This will help the student build the understanding that just as the concrete objects are iterated: the intervals (inches or centimeters) on rulers are iterated.

2(9) Geometry and measurement. The student applies mathematical process standards to select and use units to describe length, area, and time.	**2(9)(G)** The student is expected to read and write time to the nearest one-minute increment using analog and digital clocks and distinguish between a.m. and p.m.

Materials

- Analog clock
- Pictures representing time on analog and digital clocks

Procedure:
Show the student an analog clock or picture of analog or digital clocks.

What time does the clock show?
For the Analog clock: **Write the time shown on the clock.**

Repeat using various times.

Check Student's Responses:	**Check Student's Strategies:**
1. Time: _____ Analog | Digital □ Correct □ Incorrect _____ Writes Time: □ Correct □ Incorrect _____	The student: □ Used skip counting to determine time □ Said time without pointing or counting □ Other:
2. Time: _____ Analog | Digital □ Correct □ Incorrect _____ Writes Time: □ Correct □ Incorrect _____	The student: □ Used skip counting to determine time □ Said time without pointing or counting □ Other:
3. Time: _____ Analog | Digital □ Correct □ Incorrect _____ Writes Time: □ Correct □ Incorrect _____	The student: □ Used skip counting to determine time □ Said time without pointing or counting □ Other:

Notes:

2(9)(G) The student is expected to read and write time to the nearest one-minute increment using analog and digital clocks and distinguish between a.m. and p.m.	**Possible interpretations, issues to follow up on, and implications for teaching**

What did you observe?

- The student **correctly read and wrote the times shown.** This student may have the foundational skills necessary to solve problems involving time.

- The student **confused the hours and minutes.**

  A teaching strategy might include working with analog faces that are on the hour and half hour so the student gains practice corresponding the small hand with the hour and the large hand hour or half hour. Once they are more comfortable with recognizing what each hand represents, move on to quarter hours, then five-minute intervals. It may be beneficial to review skip counting by fives as you point and count around the face of the clock.