C1. What were you using in your work on patterns, functions, or algebra? (Mark all that apply.)

- Objects (C1a)
- Shapes or designs (C1b)
- Numbers (C1c)
- Symbols (C1d)
- Formulas or equations (C1e)

C2. What did the target student work on today?

(For each area you choose below, place an “X” in a box to indicate whether it was a focus of instruction or was touched on briefly.)

- Organizing objects by size, number, or other properties (C2a)
- Creating, continuing, or explaining repeating patterns (e.g., 2, 1, 2, 1 … or △ ○ △ ○ …) (C2b)
- Constructing sequences, explaining their patterns, or predicting subsequent terms (e.g., 3, 7, 11, 15…) (C2c)
- Finding and explaining other patterns (e.g., patterns in a representation like the hundreds chart or patterns in a word problem) (C2d)
- The use of a symbol to stand for an unknown number (e.g., 3 + □ = 7) (C2e)
- Understanding and using formulas or equations expressed in symbolic form (C2f)
- Expressing a function or a sequence as a general rule using words, tables, or formulas (C2g)

C3. What did you or the target student use to work on the aspects of patterns, functions, or algebra that you checked in Question C2?

(For any of the following items you choose, place an “X” in the corresponding box. Mark all that apply.)

- Concrete materials (C3b)
- Real-life situations or word problems (C3c)
- Tables or charts (C3d)
- I made explicit links between two or more of these representations (C3f)

C4. What was the target student asked to do during the work on patterns, functions, or algebra?

(Mark all that apply, but only if the target student did it for a sustained period of time.)

- Number concepts (whole number, decimal, or fraction) (C4a)
- Perform tasks requiring ideas or methods already introduced to the student (C4b)
- Assess a problem and choose a method to use from those already introduced to the student (C4c)
- Perform tasks requiring ideas or methods not already introduced to the student (C4d)
- Explain an answer or a solution method for a particular problem (C4e)
- Analyze similarities and differences among representations, solutions, or methods (C4f)
- Prove that a solution is valid or that a method works for all similar cases (C4g)

C5. Did the target student’s work on patterns, functions, or algebra today include any of the following?

(Mark all that apply, but only if the target student did it for a sustained period of time.)

- Oral answering recall questions (C5a)
- Working on textbook, worksheet, or board work exercises for practice or review (C5b)
- Working on problem(s) that have multiple answers or solution methods, or involve multiple steps (C5c)
- Discussing ideas, problems, solutions, or methods in pairs or small groups (C5d)
- Using flashcards, games, or computer activities to improve recall or skill (C5e)
- Writing extended explanations of mathematical ideas, solutions, or methods (C5f)
- Working on an investigation, problem, or project over an extended period of time (C5g)

C1. What were you using in your work on patterns, functions, or algebra? (Mark all that apply.)

- Object (C1a)
- Shapes or designs (C1b)
- Numbers (C1c)
- Symbols (C1d)
- Formulas or equations (C1e)

C2. What did the target student work on today?

(For each area you choose below, place an “X” in a box to indicate whether it was a focus of instruction or was touched on briefly.)

- Organizing objects by size, number, or other properties (C2a)
- Creating, continuing, or explaining repeating patterns (e.g., 2, 1, 2, 1 … or △ ○ △ ○ …) (C2b)
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- Understanding and using formulas or equations expressed in symbolic form (C2f)
- Expressing a function or a sequence as a general rule using words, tables, or formulas (C2g)

C3. What did you or the target student use to work on the aspects of patterns, functions, or algebra that you checked in Question C2?

(For any of the following items you choose, place an “X” in the corresponding box. Mark all that apply.)

- Numbers or symbols (C3a)
- Concrete materials (C3b)
- Real-life situations or word problems (C3c)
- Pictures or diagrams (C3d)
- Tables or charts (C3a)
- I made explicit links between two or more of these representations (C3f)

C4. What was the target student asked to do during the work on patterns, functions, or algebra?

(Mark all that apply, but only if the target student did it for a sustained period of time.)

- Number concepts (whole number, decimal, or fraction) (C4a)
- Perform tasks requiring ideas or methods already introduced to the student (C4b)
- Assess a problem and choose a method to use from those already introduced to the student (C4c)
- Perform tasks requiring ideas or methods not already introduced to the student (C4d)
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- Analyze similarities and differences among representations, solutions, or methods (C4f)
- Prove that a solution is valid or that a method works for all similar cases (C4g)

C5. Did the target student’s work on patterns, functions, or algebra today include any of the following?

(Mark all that apply, but only if the target student did it for a sustained period of time.)

- Oral answering recall questions (C5a)
- Working on textbook, worksheet, or board work exercises for practice or review (C5b)
- Working on problem(s) that have multiple answers or solution methods, or involve multiple steps (C5c)
- Discussing ideas, problems, solutions, or methods in pairs or small groups (C5d)
- Using flashcards, games, or computer activities to improve recall or skill (C5e)
- Writing extended explanations of mathematical ideas, solutions, or methods (C5f)
- Working on an investigation, problem, or project over an extended period of time (C5g)
### A - Number Concepts

**A1.** What were you using in your work on number concepts? (Mark all that apply.)
- Whole numbers (A1a)
- Decimals (A1b)
- Fractions (A1c)
- Numbers or symbols (A3a)
- Concrete materials (A3b)
- Real-life situations or word problems (A3c)
- Pictures or diagrams (A3d)
- Tables or charts (A3e)
- I made explicit links between two or more of these representations (A3f)

**A2.** Did the target student work on today?

<table>
<thead>
<tr>
<th>Operation(s)</th>
<th>Focused on Instruction</th>
<th>Touched on Briefly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole numbers (A1a)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decimals (A1b)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fractions (A1c)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Addition (B1a)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtraction (B1b)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiplication (B1c)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Division (B1d)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**A3.** What did you or the target student use to work on the aspects of number concepts that you checked in Question A2?

For each area you choose, place an "X" in the corresponding box. Mark all that apply.
- Listen to me present the definition for a term or the steps of a procedure (A4a)
- Perform tasks requiring ideas or methods already introduced to the student (A4b)
- Assess a problem and choose a method to use from those already introduced to the student (A4c)
- Perform tasks requiring ideas or methods not already introduced to the student (A4d)
- Explain an answer or a solution method for a particular problem (A4e)
- Analyze similarities and differences among representations, solutions, or methods (A4f)
- Prove that a solution is valid or that a method works for all similar cases (A4g)

**A4.** What was the target student asked to do during the work on number concepts?

For each area you choose, place an "X" in the corresponding box. Mark all that apply, but only if the target student did it for a sustained period of time.
- Oral answering recall questions (A5a)
- Working on textbook, worksheet, or board work exercises for practice or review (A5b)
- Working on problem(s) that have multiple answers or solution methods, or involve multiple steps (A5c)
- Discussing ideas, problems, solutions, or methods in pairs or small groups (A5d)
- Using flashcards, games, or computer activities to improve recall or skill (A5e)
- Writing extended explanations of mathematical ideas, solutions, or methods (A5f)
- Working on an investigation, problem, or project over an extended period of time (A5g)

**A5.** Did the target student's work on number concepts today include any of the following?

For each area you choose, place an "X" in the corresponding box. Mark all that apply, but only if the target student did it for a sustained period of time.
- Oral answering recall questions (A5a)
- Working on textbook, worksheet, or board work exercises for practice or review (A5b)
- Working on problem(s) that have multiple answers or solution methods, or involve multiple steps (A5c)
- Discussing ideas, problems, solutions, or methods in pairs or small groups (A5d)
- Using flashcards, games, or computer activities to improve recall or skill (A5e)
- Writing extended explanations of mathematical ideas, solutions, or methods (A5f)
- Working on an investigation, problem, or project over an extended period of time (A5g)
### A - Number Concepts

**A1. What were you using in your work on number concepts? (Mark all that apply.)**

- Whole numbers (A1a)
- Decimals (A1b)
- Fractions (A1c)
- Numbers or symbols (A3a)
- Concrete materials (A3b)
- Real-life situations or word problems (A3c)
- Pictures or diagrams (A3d)
- Tables or charts (A3e)
- I made explicit links between two or more of these representations (A3f)

**A2. What did the target student work on today?**

(For each area you choose below, place an "X" in a box to indicate whether it was a focus of instruction or was touched on briefly.)

- Whole numbers (e.g., even and odd, prime, square) (A2a)
- Factors, multiples, or divisibility with whole numbers (A2a)
- Properties of whole numbers (e.g., even and odd, prime, square) (A2a)
- Counting (A2b)
- Counting or ordering two or more quantities (A2b)
- Composing or decomposing (grouping) whole numbers or decimals into tens, ones, tens, hundreds, etc. (A2f)
- Identifying the values of the places in whole numbers or decimals (A2g)
- Understanding equivalent fractions or working on reducing fractions (A2h)
- Relationships between decimals and fractions (A2i)
- Estimating the size of quantities or rounding off numbers (A2k)

**A3. What did you or the target student use to work on the aspects of number concepts that you checked in Question A2?**

(For any of the following items you choose, place an "X" in the corresponding box. Mark all that apply.)

- Concrete materials (A3b)
- Real-life situations or word problems (A3c)
- Numbers or symbols (B3a)
- Pictures or diagrams (B3d)
- Tables or charts (B3e)
- I made explicit links between two or more of these representations (B3f)
- I made explicit links between two or more of these representations (A3f)

**A4. What was the target student asked to do during the work on number concepts? (Mark all that apply, but only if the target student did it for a sustained period of time.)**

- Listen to me present the definition for a term or the steps of a procedure (A4a)
- Perform tasks requiring ideas or methods already introduced to the student (A4b)
- Analyze similarities and differences among representations, solutions, or methods (A4c)
- Assess a problem and choose a method to use from those already introduced to the student (A4c)
- Perform tasks requiring ideas or methods not already introduced to the student (A4d)
- Analyze an answer or a solution method for a particular problem (A4e)
- Prove that a solution is valid or that a method works for all similar cases (A4f)

**A5. Did the target student’s work on number concepts today include any of the following?**

(If there were multiple students, mark all that apply, but only if the target student did it for a sustained period of time.)

- Oral presentation (A5a)
- Working on textbook, worksheet, or board work exercises for practice or review (A5b)
- Working on problem(s) that have multiple answers or solution methods, or involve multiple steps (A5c)
- Discouraging ideas, problems, solutions, or methods in pairs or small groups (A5d)
- Using flashcards, games, or computer activities to improve recall or skill (A5e)
- Writing extended explanations of mathematical ideas, solutions, or methods (A5f)
- Working on an investigation, problem, or project over an extended period of time (A5g)

### B - Operations

**B0. Which operation(s) did you focus on today? (Mark all that apply.)**

- Addition (B0a)
- Subtraction (B0b)
- Multiplication (B0c)
- Division (B0d)

**B1. What were you using in your work on operations?**

(For each area you choose below, place an "X" in a box to indicate whether it was a focus of instruction or was touched on briefly.)

- Whole numbers (B1a)
- Decimals (B1b)
- Fractions (B1c)
- Factors, multiples, or divisibility with whole numbers (A2a)
- Properties of whole numbers (e.g., even and odd, prime, square) (A2a)
- Counting (A2b)
- Counting or ordering two or more quantities (A2b)
- Composing or decomposing (grouping) whole numbers or decimals into tens, ones, tens, hundreds, etc. (A2f)
- Identifying the values of the places in whole numbers or decimals (A2g)
- Understanding equivalent fractions or working on reducing fractions (A2h)
- Relationships between decimals and fractions (A2i)
- Estimating the size of quantities or rounding off numbers (A2k)

**B2. What did the target student work on today?**

(For each area you choose below, place an "X" in a box to indicate whether it was a focus of instruction or was touched on briefly.)

- The meaning or properties of an operation (B2a)
- Basic facts (whole numbers only): Methods or strategies for finding answers to basic facts (B2b)
- Practicing basic facts for speed or accuracy (B2c)
- Computation with multi-digit whole numbers, decimals, or fractions: Why a conventional computation procedure works (B2d)
- How to carry out the steps of a conventional computation procedure (B2e)
- Practicing computation procedures for speed, accuracy, or ease of use (B2f)
- Developing transitional, alternative, or non-conventional methods for doing computation (B2g)
- Applying basic facts or computation to solve word problems or puzzles (B2h)
- Estimating the answer to a computation problem (B2i)

**B3. What did you or the target student use to work on the aspects of operations that you checked in Question B2?**

(For any of the following items you choose, place an "X" in the corresponding box. Mark all that apply.)

- Numbers or symbols (B3a)
- Concrete materials (B3b)
- Real-life situations or word problems (B3c)
- Pictures or diagrams (B3d)
- Tables or charts (B3e)
- I made explicit links between two or more of these representations (B3f)

**B4. What was the target student asked to do during the work on operations?**

(If there were multiple students, mark all that apply, but only if the target student did it for a sustained period of time.)

- Listen to me present the definition for a term or the steps of a procedure (B4a)
- Perform tasks requiring ideas or methods already introduced to the student (B4b)
- Assess a problem and choose a method to use from those already introduced to the student (B4c)
- Perform tasks requiring ideas or methods not already introduced to the student (B4d)
- Explain an answer or a solution method for a particular problem (B4e)
- Analyze similarities and differences among representations, solutions, or methods (B4f)
- Prove that a solution is valid or that a method works for all similar cases (B4f)

**B5. Did the target student’s work on operations today include any of the following?**

(If there were multiple students, mark all that apply, but only if the target student did it for a sustained period of time.)

- Oral presentation (B5a)
- Working on textbook, worksheet, or board work exercises for practice or review (B5b)
- Working on problem(s) that have multiple answers or solution methods, or involve multiple steps (B5c)
- Discouraging ideas, problems, solutions, or methods in pairs or small groups (B5d)
- Using flashcards, games, or computer activities to improve recall or skill (B5e)
- Writing extended explanations of mathematical ideas, solutions, or methods (B5f)
- Working on an investigation, problem, or project over an extended period of time (B5g)
**C1. What were you using in your work on patterns, functions, or algebra? (Mark all that apply.)**

- Objects (C1a)
- Shapes or designs (C1b)
- Numbers (C1c)
- Symbols (C1d)
- Formulas or equations (C1e)

**Types of patterns:**
- Creating, continuing, or explaining repeating patterns (e.g., 2, 1, 2, 1 … or △ ○ △ ○ …) (C2b)
- Constructing sequences, explaining their patterns, or predicting subsequent terms (e.g., 3, 7, 11, 15…) (C2c)
- Finding and explaining other patterns (e.g., patterns in a representation like the hundreds chart or patterns in a word problem) (C2d)
- The use of a symbol to stand for an unknown number (e.g., 3 + □ = 7) (C2e)
- Understanding and using formulas or equations expressed in symbolic form (C2f)
- Expressing a function or a sequence as a general rule using words, tables, or formulas (C2g)

**C2. What did the target student work on today?**

(For each area you choose below, place an "X" in a box to indicate whether it was a focus of instruction or was touched on briefly.)

<table>
<thead>
<tr>
<th>A focus of instruction</th>
<th>Touched on briefly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizing objects by size, number, or other properties (C2a)</td>
<td></td>
</tr>
</tbody>
</table>

1. How much total time did the target student spend on mathematics today? Please include all mathematics instruction the target student received, including routine times such as morning or calendar math, even if the instruction took place in another room or by another teacher.

2. Of the mathematics time recorded in Question 1, how much time were you either the teacher or an observer of the teaching?

(For any of the following items you choose, place an "X" in the corresponding box. Mark all that apply.)

- Target student was absent
- I was absent
- School was not in session (e.g., vacation period)
- There was a field trip, assembly, visitor, or other special event
- Target student participated in standardized testing/test preparation
- Target student received "pull out" instruction
- Other

**C3. What did you or the target student use to work on the aspects of patterns, functions, or algebra that you checked in Question C2?**

(For any of the following items you choose, place an "X" in the corresponding box. Mark all that apply.)

- Numbers or symbols (C3a)
- Concrete materials (C3b)
- Real-life situations or word problems (C3c)
- Pictures or diagrams (C3d)
- Tables or charts (C3e)
- I made explicit links between two or more of these representations (C3f)

**C4. What was the target student asked to do during the work on patterns, functions, or algebra?**

(For any that apply, but only if the target student did it for a sustained period of time.)

- Listen to me present the definition for a term or the steps of a procedure (C4a)
- Perform tasks requiring ideas or methods already introduced to the student (C4b)
- Assess a problem and choose a method to use from those already introduced to the student (C4c)
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- Analyze similarities and differences among representations, solutions, or methods (C4f)
- Prove that a solution is valid or that a method works for all similar cases (C4g)

**C5. Did the target student’s work on patterns, functions, or algebra today include any of the following?**

(For any that apply, but only if the target student did it for a sustained period of time.)

- Orally answering recall questions (C5a)
- Working on textbook, worksheet, or board work exercises for practice or review (C5b)
- Working on problem(s) that have multiple answers or solution methods, or involve multiple steps (C5c)
- Discussing ideas, problems, solutions, or methods in pairs or small groups (C5d)
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- Writing extended explanations of mathematical ideas, solutions, or methods (C5f)
- Working on an investigation, problem, or project over an extended period of time (C5g)

**C4. What was the target student asked to do during the work on patterns, functions, or algebra?**

(For any that apply, but only if the target student did it for a sustained period of time.)

- a. Number concepts (whole number, decimal, or fraction)..............
- b. Operations (whole number, decimal, or fraction)..................
- c. Patterns, functions, or algebra......................
- d. Other mathematical content
  - 1. Learning about money, telling time, or reading a calendar........
  - 2. Representing or interpreting data...........................
  - 3. Geometry.............................................
  - 4. Measurement........................................
  - 5. Probability.........................................
  - 6. Percent, ratio, or proportion.........................
  - 7. Negative numbers...................................
  - 8. Other .............................................

**C5. Did the target student’s work on patterns, functions, or algebra today include any of the following?**

(For any that apply, but only if the target student did it for a sustained period of time.)

- a. Number concepts (whole number, decimal, or fraction)..............
- b. Operations (whole number, decimal, or fraction)..................
- c. Patterns, functions, or algebra...........................
- d. Other mathematical content
  - 1. Learning about money, telling time, or reading a calendar........
  - 2. Representing or interpreting data..........................
  - 3. Geometry...........................................
  - 4. Measurement......................................
  - 5. Probability........................................
  - 6. Percent, ratio, or proportion..........................
  - 7. Negative numbers..................................
  - 8. Other ............................................

**If you marked major focus or minor focus for Questions 4a, 4b, or 4c, please turn the page and answer the questions for the section(s) indicated in the color boxes above. All others STOP HERE.**