

Grade 3: Midyear

Universal Screener for Number Sense

Instructions

Modified for MOST – Fall 2025

Use with 4th, 5th, and 6th grade students

Interview

Interviews should be conducted one-on-one with students. Do not provide paper and pencil, and provide materials only as directed

Interviews can be done by sitting with a single student and working through all of the questions or can be done one or two questions at a time. For example, teachers might find that they can quickly and easily assess counting by moving around the room to listen to students count and then, later, in a separate session, set up a table with the necessary materials and pull students one at a time to complete those tasks that use materials.

We encourage that the interviews be done by the primary teacher, if possible, since so much of the important information that comes from these tasks cannot be captured in a score.

Grade 3: Midyear

Universal Screener for Number Sense

Interview - Detailed Script and Rubrics, *print 1 copy/test*

Modified for MOST – Fall 2025

Use with 4th, 5th, and 6th grade students

Number Word Sequence/Place Value 3.NBT.A.2

Number Sense: Backward Number Word Sequences

1. **"Let's do some counting. Start at the number three hundred two and count backward. I will tell you when to stop."** Stop at 298. If the student makes a minor mistake that you think might be corrected on a second attempt ask the student. **"Let me hear that one more time."**
 - If still incorrect, **"Count forward starting at 98"** (stop at 112)

3	2	1	0
Student counts accurately on first attempt. (minor self-corrections allowed)	Student counts accurately but with uncertainties; correct on second attempt, or on first attempt with significant pauses or self-corrections	Counts from 98 -112. Student does not accurately count from 302-298.	Does not accurately count from 98 - 112

Commentary: Backward counts across decade numbers is a skill that is not a "memorization" of the number sequence but reveals an understanding of the number system. It is for that reason that this task aligns with Number in Base Ten.

Represent Multiplication: 3.OA.A.1

Number Sense: Model Multiplication with Materials

2. Have counters available for the student (more than 12). Present the expression 3×4 . **"Read this."** Correct the student if they misread. **"How could you use these to show 3 times 4?"** Probe the student briefly to ensure that they understand that they have created groups.

3	2	1
Student creates a 3 by 4 array or 3 groups of 4, or 4 groups of 3 and explains clearly.	Student does show three groups of four or four groups of three but only after additional prompting. Or student rote creates an array or some other accurate configuration, but cannot explain repetitions of equal groupings.	Student does not show <i>either</i> 3 groups of 4 or 4 groups of three.

Commentary: The ability to create a model that matches multiplication (and division) problems is an excellent indicator of a conceptual understanding. This learning is essential to the work of third grade. Any students who are unsuccessful should be given ample opportunities to learn and practice this idea. Note that the rote skill of building groups and/or arrays is a stepping stone in the correct direction. Continued work with visual models, along with opportunities to discuss these visual models, supports the conceptual development.

A common thing is for students to create a group of three and a group of 4, then to attempt to somehow put an x. Usually, the explanation falls apart at this point, yet it isn't unusual that the student has memorized the answer of 12. Score as level 1 if the student is unable to create a multiplicative model.

This problem is not assessing whether the student knows the answer 12. It is about whether the student creates a concrete representation of *why* 3×4 is 12. For that reason, if a student says the answer is 12, yet has not created a configuration that reflects 12, it is OK to probe. **"I see three here, and four here. You say the answer is 12. I don't see 12 anywhere. Can you show me how this makes 12?"** (See score of 2.)

Grade 3: Midyear

Universal Screener for Number Sense

Modified for MOST – Fall 2025

Use with 4th, 5th, and 6th grade students

Subtraction with Addition Scaffold: 3.NBT.A.2

Number Sense: Subtraction - Mental Math

3. Present the card $200 - 198$ and say, **"Read this."** Check to ensure that the student has read the problem accurately. **"How much is 200 minus 198?"**

- If the student begins to attempt the use of a traditional algorithm (usually evident when the student starts to draw the problem with their finger on the table.) Say, **"It looks like you are trying to solve the problem the paper and pencil way. Do you have another way you might use to solve this problem?"**
- If the student is unable to solve $200 - 198$, present the expression, $198 + 2$. **"Could you use this to help you?"**

3	2	1
Student solves without need for additional prompt.	Student can solve $200 - 198$ after presented with $198 + 2$	Student cannot solve even when supported with $198 + 2$
Commentary: The continued conceptualization of differences and place value are the targets of this task. Students who understand this problem well will choose to count up from 198 to 200 to find the difference, or count back 199, 198 or will simply know that the $8 + 2$ is 10 and so therefore the answer is two.		

Addition with Scaffold: 3.NBT.A.2

Number Sense: Addition – Mental Math

4. Present the expression $299 + 102$. **"Read this card."** Check to ensure that the student has read the problem accurately. Correct students who do not read it correctly. **"How much is 299 plus 102?"**

- If the student begins to attempt the use of a traditional algorithm (usually evident when the student starts to draw the problem with their finger on the table.) Say, **"It looks like you are trying to solve the problem the paper and pencil way. Do you have another way you might use to solve this problem?"**
- If student is unable to solve, present the card $299 + 2$ with the first card. **"Could you use this to help you?"**

3	2	1
Student answers 401 without need for additional prompt.	Student can solve after presented with $299 + 2$.	Student cannot solve even when supported with $299 + 2$.
Commentary: The ability of students to coordinate hundreds, tens, and ones represents an important developmental milestone for students. Providing anchor problems for students to develop mental anchors can support students who are developing this ability.		

Grade 3: Midyear

Universal Screener for Number Sense

Modified for MOST – Fall 2025

Use with 4th, 5th, and 6th grade students

5. Tell a Multiplication Story: 3.OA.A.1

Number Sense: Problem Posing – Multiplication

$$8 \times 4 = 32$$

3	2	1
The story directly matches the multiplication situation, showing either 8 groups of 4 or 4 groups of 8 and includes a question that matches the situation	The story is a multiplicative situation but includes slight errors in the syntax or in the formation of the question.	The situation is not multiplicative (e.g. the story is additive).

6. Tell a Division Story: 3.OA.A.2

Number Sense: Problem Posing – Division

$$56 \div 8 = 7$$

3	2	1
The story directly matches the division situation, showing either a partitive situation (e.g. 56 things in 8 groups, how many in each group?) or quotative (e.g. 56 things with 8 in each group, how many groups?) Story includes a question that matches the story.	The story represents a division situation but includes slight errors in the syntax or in the formation of the question.	The situation is not division (e.g. the story is subtractive).

7. Identify Number Pairs that add up to 15: 2.OA.B.2

Number Sense: Structuring to 20

3	2	1
Correct/fluent: The student identifies three number pairs that make 15 and uses non-counting strategies to explain how they know	Correct/works out: Student is able to identify numbers that combine to make 15, but needs significant think time or counts to find answer.	Incorrect: Student identifies only 1 or 2 pairs of numbers that add to 15.

8. Add: 3.NBT.A.2

Number Sense: Computation -Addition

$$74 + 48$$

3	2	1
Student solves the problem accurately using strategies that show understanding of place value.	Student solves the problem correctly, but can only solve using algorithm OR By using non-base ten strategy (e.g., counts on from 74 by ones)	Answer is incorrect or unable to solve.
Commentary: This problem is included in this assessment so that you can observe student's thinking on two-digit addition problems. Flexibility in mental computation is an important skill.		

Grade 3: Midyear

Universal Screener for Number Sense

Modified for MOST – Fall 2025

Use with 4th, 5th, and 6th grade students

9. Subtract: 3.NBT.A.2

Number Sense: Computation -Subtraction

92 - 85

3	2	1
Student solves the problem accurately using strategies that show understanding of place value.	Student solves the problem correctly, but can only solve using algorithm OR By using a non-base ten strategy (e.g., counts by ones down from 92 or up from 85).	Answer is incorrect, or unable to solve.
Commentary: This problem is included in this assessment so that you can observe student's thinking on two-digit subtraction problems. Flexibility in mental computation is an important skill.		

Number Word Sequence/Place Value

1. **"Let's do some counting. Start at the number 302 and count backward. I will tell you when to stop."** Stop at 298.

- If the student makes a minor mistake on their first attempt second attempt, say, **"Let me hear that one more time. Start at the number 302 and count backward."**
- If the student is still unsuccessful say, **"This time let's count forward. Start at the number 98 and count up. I will tell you when to stop."** (Stop at 112)

Represent Multiplication

2. Have counters available for the student (more than 12). Present the expression 3×4 . **"Read this."** Correct the student if they misread.

"How could you use these to show 3 times 4?" Probe the student briefly to ensure that they understand that they have created groups.

Subtraction with Addition Scaffold

3. **"Read this,"** present $200 - 198$. Check to ensure that the student has read the problem accurately. **"How much is 200 minus 198?"**

If the student begins to attempt the use of a traditional algorithm (usually evident when the student starts to draw the problem with their finger on the table.) Say, **"It looks like you are trying to solve the problem the paper and pencil way. Do you have another way you might use to solve this problem?"**

If the student is unable to solve $200 - 198$, present the expression, $198 + 2$. **"Could you use this to help you?"**

Addition with Scaffold

4. Present the expression $299 + 102$. **"Read this card."** Check to ensure that the student has read the problem accurately. **"How much is 299 plus 102?"**

If the student begins to attempt the use of a traditional algorithm (usually evident when the student starts to draw the problem with their finger on the table.) Say, **"It looks like you are trying to solve the problem the paper and pencil way. Do you have another way you might use to solve this problem?"**

If student is unable to solve, present the card $299 + 2$ with the first card. **"Could you use this to help you?"**

Problem Posing - Multiplication

5. Present the expression $8 \times 4 = 32$. **"Read this card."** Check to ensure that the student has read the problem accurately. **"Tell me a story problem for $8 \times 4 = 32$ ".** Record student's story in note catcher.

Problem Posing - Division

6. Present the expression $56 \div 8 = 7$. **"Read this card."** Check to ensure that the student has read the problem accurately. **"Tell me a story problem for $56 \div 8 = 7$ ".** Record student's story in note catcher.

Structuring to 20

7. Present the card with multiple expressions (5+9, 8+7, 6+11, 10+5, 9+6, 12+4) **"Do you see an addition problem that equals 15"**. If the student identifies one ask **"Is there another one?"** If the student identifies one more ask again **"Is there another one?"**

If it is not evident each time, ask **"How do you know that makes 15?"**

Computation-Addition

8. Present the expression $74 + 48$. **"Read this problem."** Check to ensure that the student has read the problem accurately. **"Work it out"**. When they are done say **"Tell me how you solved it"** and record the student's solution strategy

Computation-Subtraction

9. Present the expression $92 - 85$. **"Read this problem."** Check to ensure that the student has read the problem accurately. **"Work it out"**. When they are done say **"Tell me how you solved it"** and record the student's solution strategy

Grade 3: Midyear

Universal Screener for Number Sense

Spanish Quick Script, *print 1 copy/test administrator*

Modified for MOST – Fall 2025

Use with 4th, 5th, and 6th grade students

Number Word Sequence/Place Value

1. **"Vamos a contar. Comienza del número 302 y cuenta hacia atrás. Yo te avisaré cuando parar."** Stop at 298.

If the student makes a minor mistake that you think might be corrected on a second attempt, ask the student. **"Déjame escuchar una vez mas."**

Represent Multiplication

2. Have counters available for the student (more than 12). Present the expression 3×4 . **"Lee esto."** Correct the student if they misread.

"¿Como podrías usar estas para demostrar 3 veces 4?" Probe the student briefly to ensure that they understand that they have created groups.

Subtraction with Addition Scaffold

3. **"Lee esto,"** present $200 - 198$. Check to ensure that the student has read the problem accurately. **"¿Cuánto es 200 menos 198?"**

If the student begins to attempt the use of a traditional algorithm (usually evident when the student starts to draw the problem with their finger on the table.) Say, **"Parece que estas tratando de resolver el problema en la manera de papel y lápiz. ¿Tienes otra manera que podrías usar para resolver este problema?"**

If the student is unable to solve $200 - 198$, present the expression, $198 + 2$. **"¿Podrías usar esta para ayudarte?"**

Addition with Scaffold

4. Present the expression $299 + 102$. **"Lee esta tarjeta."** Check to ensure that the student has read the problem accurately. **"¿Cuánto es 299 más 102?"**

If the student begins to attempt the use of a traditional algorithm (usually evident when the student starts to draw the problem with their finger on the table.) Say, **"Parece que estas tratando de resolver el problema en la manera de papel y lápiz. ¿Tienes otra manera que podrías usar para resolver este problema?"**

If student is unable to solve, present the card $299 + 2$ with the first card. **"¿Podrías usar esta para ayudarte?"**

Problem Posing - Multiplication

5. Present the expression $8 \times 4 = 32$. **"Lee esta tarjeta."** Check to ensure that the student has read the problem accurately. **"Me cuentas un problema de historia para $8 \times 4 = 32$ ".** Record student's story in note catcher.

Problem Posing - Division

6. Present the expression $56 \div 8 = 7$. **"Lee esta tarjeta."** Check to ensure that the student has read the problem accurately. **"Me cuentas un problema de historia para $56 \div 8 = 7$ ".** Record student's story in note catcher.

Structuring to 20

7. Present the card with multiple expressions ($5+9$, $8+7$, $6+11$, $10+5$, $9+6$, $12+4$) **"Ves un expresión de suma que es igual a 15"**. If the student identifies one ask **"¿Hay otro?"** If the student identifies one more ask again **"¿Hay otro?"**

If it is not evident each time, ask **"¿Cómo sabes que son 15?"**

Computation-Addition

8. Present the expression $74+48$. **"Lee este problema."** Check to ensure that the student has read the problem accurately. **"Resuélvelo"**. When they are done say **"Dime cómo lo resolviste"** and record the student's solution strategy

Computation-Subtraction

9. Present the expression $92-85$. **"Lee este problema."** Check to ensure that the student has read the problem accurately. **"Resuélvelo"**. When they are done say **"Dime cómo lo resolviste"** and record the student's solution strategy

Interview Note Catcher, *print 1 copy/student*

Language: ☐ English ☐ Spanish ☐ Other: _____

Use with 4th, 5th, and 6th grade students

Numbers and Operations in Base Ten	<i>score</i>
<p>3. $200 - 198$ (give $198 + 2$ if necessary)</p> <p><input type="checkbox"/> solves: 3 pts <input type="checkbox"/> solves with additional prompt: 2 pts <input type="checkbox"/> cannot solve: 1 pt</p>	
<p>4. $299 + 102$ (give $299 + 2$ if necessary)</p> <p><input type="checkbox"/> solves: 3 pts <input type="checkbox"/> solves with additional prompt: 2 pts <input type="checkbox"/> cannot solve: 1 pt</p>	
Problems in Context – Multiplication and Division	<i>score</i>
<p>5. $8 \times 4 = 32$ Notes:</p> <p><input type="checkbox"/> multiplicative story using 8 and 4: 3 pts <input type="checkbox"/> multiplicative story with slight errors: 2 pts <input type="checkbox"/> non-multiplicative story: 1 pt</p>	
<p>6. $56 \div 8 = 7$ Notes:</p> <p><input type="checkbox"/> division story using 56 and 8: 3 pts <input type="checkbox"/> division story with slight errors: 2 pts <input type="checkbox"/> non- division story: 1 pt</p>	

Modified for MOST – Fall 2025

Use with 4th, 5th, and 6th grade students

Modified for MOST – Fall 2025
Use with 4th, 5th, and 6th grade students

$$299 + 102$$

$$299 + 2$$

$$198 + 2$$

$$56 \div 8 = 7$$

$$200 - 198$$

$$8 \times 4 = 32$$

$$3 \times 4$$

$$74 + 48$$

Modified for MOST – Fall 2025

Use with 4th, 5th, and 6th grade students

$$92 - 85$$

$$5 + 9$$

$$8 + 7$$

$$6 + 11$$

$$10 + 5$$

$$9 + 6$$

$$12 + 4$$

Screeners Cards – Page 2 of 2

Modified for MOST – Fall 2025

Use with 4th, 5th, and 6th grade students