

Grade 1

Fall Universal Screener for Number Sense

Instructions and Guidance:

The Fall USNS is an interview-based assessment.

Who? Whenever possible, the teacher who works most directly with the child should be the one to administer the interview portion of the screener and score the written portion.

Read the entire assessment through in preparation and run through the tasks.

Prepare the materials. Only provide materials as described in the script.

Do not provide the student with paper and pencil.

Set up in a place with as few distractions as possible.

Keep a good pace. Most assessments will take 4 – 5 minutes.

Limit Questioning: It is usually best to attempt to limit questioning and move at a steady pace through the tasks. This improves the efficiency, but also helps to ensure the consistency of administration, and therefore the reliability of the results.

Be flexible: You might find that you can work most efficiently by administering one task at a time, moving from student to student rather than having them come to a station. This can be done with the counting tasks and numeral ID task. Users of Forefront will find that the interview tool can be switched to focus on tasks. Here is a help article for using [the interview tool](#).

Collaborate: Sometimes groups of students can be reorganized in creative ways to provide one teacher with the ability to sit with individual students.

Watch carefully and take notes: The nuances in behaviors that reveal a child's number sense development are sometimes hard to see and hear.

Smile and do your best to make the situation as stress free as possible. If the child seems particularly timid or nervous, consider trying at another time.

Video tape: Although it is not necessary for the administration of the assessment, recording an assessment or two to discuss with colleagues can be an excellent way to learn together, build consistency in administration and scoring, and communicate with parents.

Grade 1: Fall

Number Sense Screener

Note Catcher, *print 1 copy/student*

Name: _____
Date: _____ Teacher: _____
Language of Assessment: <input type="checkbox"/> English <input type="checkbox"/> Spanish <input type="checkbox"/> Other: _____
AVMR Assessment(s) Suggested? <input type="checkbox"/> No <input type="checkbox"/> Yes (see below)

Number Words and Numerals	score
<i>scoring: correct & fluent: 3pts, correct on 2nd attempt or uncertain: 2pts, unsuccessful: 1 pt</i>	
1. "Start counting from 1 and I will tell you when to stop." (stop at 22) Notes:	
2. "Start counting again. This time start at the number 38." (stop at 42) Notes:	
3. Count by 10s. (Stop at 100) Notes:	
4. Numeral Identification: 8 _____ 5 _____ 12 _____ 17 _____ 20 _____ <input type="checkbox"/> correct and fluent: 3 pts <input type="checkbox"/> correct but uncertain: 2 pts <input type="checkbox"/> any unsuccessful: 1 pt Notes:	
AVMR Number Words and Numerals Assessment recommended? _____	
Addition and Subtraction	score
<i>scoring: correct on the first attempt: 3 pts, correct on second attempt: 2 pts, unsuccessful: 1 pt</i>	
5. Count 15 counters Notes:	
6. $4 + 3 = 7$ with covered counters Notes:	
7. $8 - 2 = 6$ with counters partially covered Notes:	
AVMR Addition and Subtraction Assessment recommended? _____	
Structuring Number	score
<i>scoring: correct/automatic: 3 pts, correct/works out (fingers, counting): 2 pts, incorrect: 1 pt</i>	
8. 5 bears, then 4 covered Notes:	
9. 5 bears, then 2 covered Notes:	
AVMR Structuring Number Assessment recommended? _____	
Place Value	score
10. 10 dots and 3 more <input type="checkbox"/> 13 w/o counting or counts from 10: 3 pts <input type="checkbox"/> correct counts all: 2 pts <input type="checkbox"/> incorrect: 1 pt Notes:	
AVMR Place Value Assessment recommended? _____	



Grade 1: Fall

Administration Guide

Detailed Script and Scoring Guide, *print 1 copy/test administrator*

Count to 22

Number Sense: Forward Number Word Sequences

1. **“Start counting from one and I will tell you when to stop.”** (Stop at 22) Listen carefully. If a student appears to skip a number, have them try again. Sometimes it helps to ask the student to count slowly and loudly.

3	2	1
Correct/fluent on 1st attempt	Correct, but uncertain: Enter a score of 2 if the student is hesitant or makes self-corrections, or if student is correct on 2 nd attempt.	Unsuccessful: Student is unable to complete the count to 22 without errors.

Commentary: By the end of kindergarten students are expected to be able to count to 100 starting from any number in the sequence. The ability to be able to count is an important foundational skill and one that is highly indicative success in first grade. Students who are unable to count to 22 should immediately be considered for targeted instruction and their progress should be monitored.

For students who score 1 or 2 on this task consider the Add+Vantage Math Recovery Assessment Number Words and Numerals.

Count from 38 to 42

Number Sense: Forward Number Word Sequences

2. **“Start counting again. This time start at the number 38.”** (stop at 42)

If the student has difficulties getting started say, **“Say the number 38.”** (Child says 38) **“Good, now keep counting.”**

3	2	1
Correct/fluent: Student counts from 38-42 without delays or self-corrections.	Correct, but uncertain: Student is able to complete the count but makes-self corrections, is hesitant, or needs to drop back for a “running start.”	Unsuccessful: Student is unable to complete the count.

Commentary: The ability to start a count starting at any number in the sequence is a foundational skill for using counting on for addition and counting back for subtraction. For students who score 1 on this task consider administering the Add+Vantage Math Recovery Assessment Number Words and Numerals.



Grade 1: Fall

Count by 10s

Number Sense: Skip Count by 10s

3. “Count by tens.” (Stop at 100) If a student is unsure what the prompt means and hesitates to start or starts counting 10, 11, 12, etc. it is ok to support the student by saying, “Count by tens, like this 10, 20...” (do not go past 20 with this additional prompt.) If the student makes mistakes you may as the student to count again.

3	2	1
Correct/fluent: Students counts by tens without significant pauses. Minor self-corrections are ok.	Correct, but uncertain: Student makes longer pauses, and or makes self-corrections. If the student makes mistakes on the first count and you ask them to try again and they are successful on a second attempt enter a 2.	Unsuccessful: Student is unable to count by 10s to 100.
<p>Commentary: The ability to count by 10s is critical for the development of place value concepts. Although the student might not yet have a full understanding of tens, fluency with the verbal sequence will support later conceptual development. This is a skill that all students should continue to master in first grade as they move beyond 100 in their counts and as they learn to add 10 to any number under 100.</p>		

Numerals ID to 20

Number Sense: Numeral ID

4. Numeral Identification: Present each numeral card one at a time in this order.

“What number is this?” 8, 5, 12, 17, 20

3	2	1
All correct, confident: Student responds to each card promptly with the correct answer.	All correct, but uncertain: Student expresses uncertainty, self corrects or otherwise shows that they need more practice with reading numerals under 20. If the student reads 17 as 70 make note. If this is the only mistake score as a 2.	Any Incorrect: Student is unable to read one or more of the numbers.
<p>Commentary: This quick sampling of numerals is used to determine quickly if a student is confident with reading numbers to 20. Use this screener to determine which students to assess for their ability to read all numbers under 20 quickly and easily.</p> <p>For students who score 2 or 1 consider using AVMR Number Words and Numerals Assessment.</p>		



Grade 1: Fall

Count 15 Objects

Number Sense: One to One Correspondence

5. Put out 15 counters for the child to count. Can be multiple colors or all one color. **“How many counters are here?”** If student is unsuccessful on first attempt say, **“Let’s check that. Count them again very carefully.”**

3	2	1
Correct on first attempt: Student demonstrates one-to-one correspondence and a solid number word sequence to 15.	Correct on 2nd attempt: Student makes minor errors in counting that lead to inconsistency.	Unsuccessful: Student is unable to count a set of 15 objects.
<p>The ability to enumerate a set of up to 20 objects is indicative of not only an important skill, but also critical cognitive development. Students who are unable to count a set of up to 20 objects should receive targeted instruction and progress should be monitored. If there is any doubt that the student has not yet developed cardinality, after the student has completed the count ask, “So, how many are there?” If the student proceeds to count again take note of this. Students need to know that the last number said when counting represents the total number of objects in the set. If, when asked, the student counts the set again it is likely that some explicit instruction is necessary. Telling the student directly, “When we count, the last number we say is how many are there. So how many counters are there?” This will support students in developing this understanding.</p> <p>For students who are unsuccessful, consider administering AVMR Addition and Subtraction assessment.</p>		

4 and 3 Covered

Number Sense: Covered Tasks - Addition

6. Put 4 counters all of the same color in front of the child. **“Here are four counters.”** Cover them without allowing the child to count. Put out 3 more counters of a different color next to the 4. **“I am putting 3 more counters here.”** Cover them without allowing the child to count. Using your hand to indicate both groups, **“How many are there altogether?”**

3	2	1
Correct on first attempt: Student correctly answers 7. A variety of solution strategies are possible and all are valid.	Correct on second attempt: Student is unsuccessful on the first attempt, but is able to find the correct answer on 2nd attempt. Any solution strategy is acceptable.	Unsuccessful: Student is unable to solve the task successfully.
<p>This task is a strong number sense indicator, in that it is a simple task within finger range. Students who are unsuccessful with this task would likely benefit from prompt targeted instruction. The ability to solve this task is indicative of cognitive development that is foundational for success in 1st grade.</p>		



Grade 1: Fall

Eight Counters – Remove 2

Number Sense: Covered Tasks - Subtraction

7. Place 8 red counters in front of the student. **“Here are 8 red counters”** (Cover without allowing the student to count.) Remove 2 counters and leave them uncovered. **“I took two counters back out. How many are still under here?”** Point to the cover.

If the student is unsuccessful, collect the counters and lay them down again, putting them into a line as you count them aloud. **“1, 2, 3, 4, 5, 6, 7, 8”** Cover them again. **“There are 8 counters under here. I am removing two. How many are still under here?”**

3	2	1
Correct on first attempt: Student correctly answers 6 on first attempt.	Correct on second attempt: With the additional support of counting and structure student answers correctly.	Unsuccessful: After the 2nd presentation, student is still unable to solve.
Subtraction is a difficult topic to teach and to learn. Students who score 1 on this task will need additional instructional supports when subtraction is introduced in 1st grade, which is often early in the year. Consider the drawn and material supports that can support students in arriving at accurate solutions, but also for developing conceptual understanding. These same students will also likely benefit from targeted instruction. To further determine where the instructional starting point is, consider presenting a smaller number of counters (4 or 5) and remove one to see if the student is able to answer.		

Not For Distribution



Grade 1: Fall

5 Bears, Some Hiding

Number Sense: Structures, Flexibility and Fluency

8. Present bear card. Ask, “How many bears are there?” Allow the student to count if necessary and confirm that there are 5. Without child seeing, cover 4 bears. “How many bears do you see now? How many are hidden?”

9. Present bear card again. “How many bears are there?” Confirm that there are 5. Without child seeing, cover 2 bears. “How many bears do you see? How many are hidden?”

3	2	1
Correct and Automatic: Student quickly is able to identify the number of hidden bears without signs of counting.	Correct/Works out: Student is able to tell the numbers of hidden bears, but needs to count and/or use fingers to work out.	Unsuccessful: Student is unable to accurately determine the number of hidden bears.
<p>Commentary: Knowing combinations to 5 is a critical milestone on the road to fluency with addition and subtraction.</p> <p>Students who are unsuccessful with these tasks will need ample opportunities for them to develop this fluency if they are going to reach the end of 1st grade goal, which is fluency within 10.</p>		

Ten and three more

Number Sense: Place Value: Ones, Tens and Hundreds

10. “Here I have 10 dots.” Put the ten-frame onto the table in front of the child. “Here, I have 3 more. How many are there all together?”

3	2	1
Correct, counts from 10 or answers without counting: Student operates off the ten without needing to count the ten.	Correct, Counts All: Student counts the ten and the three to answer 13	Unsuccessful: Student does not answer 13
<p>Commentary: The ability to operate off of 10 is foundational for much of the work related to place value in 1st grade. Learning to do this takes time and this ability is an important developmental landmark. For students who score at a level 1 on this task, there is important work to do related to 1:1 correspondence and targeted supports are likely necessary.</p> <p>Students who score 1 on his task should be further assessed, an Add+Vantage Math Recovery Addition & Subtraction test is recommended.</p>		



Grade 1: Fall

Number Sense Screener

Quick Script, *print 1 copy for test administrator*

Numerals, Words and Sequences

1. **“Start counting from 1 and I will tell you when to stop.”** (stop at 22) If student is not successful on first attempt, you may ask them to count again.
2. **“Start counting again. This time start at the number 38.”** (stop at 42)
If the student has difficulties getting started say, **“Say the number 38.”** (Child says 38)
“Good, now keep counting.”
3. **“Count by tens.”** (stop at 100)
4. Numeral Identification Cards: 8, 5, 12, 17, 20.
Lay the cards out one at a time and ask, **“What number is this?”**

Addition and Subtraction Within 20

5. Put out 15 counters. Ask, **“How many counters are there?”**
If student is unsuccessful on first attempt say, **“Let’s check that. Count them again very carefully.”**
6. Place four counters in front of the student and cover without allowing the student to count. **“Here are 4 red counters.”** Cover three more counters with a second cover. **“Here are 3 blue counters. How many counters are there altogether?”**
Repeat the task if not successful on first attempt.
7. Place 8 red counters in front of the student. **“Here are 8 red counters.”**
Cover without allowing the student to count. Remove 2 counters and leave them uncovered. **“How many are left under here?”** Point to the cover.
If student is unsuccessful on first attempt collect the 8 counters again. Count them aloud, put them in a line, and cover again. Remove two and ask, **“How many are still under here?”**

Structures, Flexibility & Fluency

8. Present bear card. Ask, **“How many bears are there?”** Confirm that there are 5. Without child seeing, cover 4 bears.
“How many bears do you see now? How many are hidden?”
9. Present bear card again. **“How many bears are there?”** Confirm that there are 5. Without child seeing, cover 2 bears.
“How many bears do you see? How many are hidden?”

Place Value

10. **“Here I have 10 dots.”** Put the ten-frame onto the table in front of the child. **“Here, I have 3 more. How many are there all together?”**



Grade 1: Fall

Number Sense Screener

Spanish Script, *print 1 copy/test administrator*

Numerals, Words, and Sequences

1. **“Comienza a contar desde el 1 y te diré cuándo parar.”** (stop at 22) If student is not successful on first attempt, you may ask them to count again.
2. **“Comienza a contar de nuevo. Esta vez empieza con el número 38.”** (stop at 42)
If the student has difficulties getting started say, **“Diga el numero 38.”** (Child says 38)
“Bueno, sie contanto.”
3. **“Cuenta de diez en diez.”** (stop at 100)
4. Numeral Identification Cards: 8, 5, 12, 17, 20.
Lay the cards out one at a time and ask, **“¿Qué número es este?”**

Addition and Subtraction Within 20

5. Put out 15 counters. Ask, **“¿Cuántas fichas hay?”**
If student is unsuccessful on first attempt say, **“Vamos a revisar, cuenta de nuevo con mucho cuidado.”**
6. Place four counters in front of the student and cover without allowing the student to count. **“Aquí hay 4 fichas rojas.”** Cover 3 more counters with a second cover, **“Aquí hay 3 fichas azules. ¿Cuántas fichas hay en total?”**
Repeat the task if not successful on first attempt.
7. Place 8 red counters in front of the student. **“Aquí hay 8 fichas rojas.”**
Cover without allowing the student to count. Remove 2 counters and leave them uncovered. **“¿Cuántas quedan aquí debajo?”** Point to the cover.
If student is unsuccessful on first attempt collect the 8 counters again. Count them aloud, put them in a line, and cover again. Remove two and ask, **“¿Cuántas quedan todavía aquí debajo?”**

Structures, Flexibility & Fluency

8. Present bear card. Ask, **“¿Cuántos osos hay?”** Confirm that there are 5. Without child seeing, cover 4 bears.
“¿Cuántos osos ves ahora? ¿Cuántos están escondidos?”
9. Present bear card again. **“¿Cuántos osos hay?”** Confirm that there are 5. Without child seeing, cover 2 bears. **“¿Cuántos osos ves? ¿Cuántos están cubiertos?”**

Place Value

10. **“Aquí tengo diez puntos.”** Put the ten-frame onto the table in front of the child. **“Aquí tengo tres más. ¿Cuántos hay en total?”**

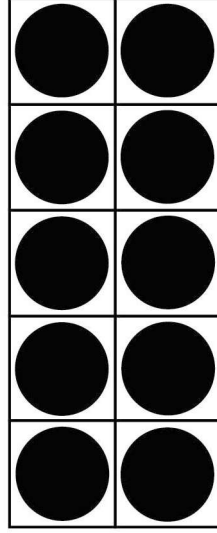


8

5

12

20



Kindergarten: Midyear

Universal Screener for Number Sense

Instructions

Interview

The interview tasks will take anywhere from 5 – 10 minutes per student. So, time yourself accordingly and allow for enough time to get it done. Teachers are encouraged to administer the interviews themselves, as the direct experience with the child provides much more information than a simple score ever can. Do not provide paper and pencil, and only provide materials as described.

Some ideas to take into consideration:

Do the counting tasks all at once, moving from student to student (rather than having them come to you), so you can complete them efficiently while the students are working independently on other things, standing in line, etc. The numeral ID task can be done easily in a similar way. Then, later, set up your materials for the covered addition and subtraction tasks to have students come one at a time to complete those tasks.

Written Portion

The written tasks are generally best administered in small groups, although some have administered the number writing tasks whole group successfully.

Provide each student with a copy of the written assessment and a pencil and read each question aloud.

For Question 1, read the following instructions:

“Write the number seven.” “Write the number five.” “Write the number ten.” “Write the number fifteen.” “Write the number twelve.”

“Escribe el número siete.” “Escribe el número cinco.” “Escribe el número diez.” “Escribe el número quince.” Escribe el número doce.”

If necessary, prompt individual students to write other numbers to determine their level of proficiency.

Materials: For the written portions of the assessment, scratch paper and manipulatives familiar to the students can be made available for the students to use if they choose to do so.



Kindergarten: Midyear

Universal Screener for Number Sense

Detailed Script and Rubrics, *print 1 copy/test administrator*

Verbal Counting

Number Sense: Forward Number Word Sequences

1. **“Let me hear you start counting from 17.”** Allow student to count to at least 30.
 If student is unsuccessful say, **“Start counting from 8 and I’ll tell you when to stop.”** Allow student to count to at least 30.
 If student is not successful starting from 8, have the student start from 1.

3	2	1	0
Able to count fluently to 30 starting from 17.	Student counts to 30 starting from 17, but might have longer pauses, or self-corrections. Or Student counts to 30 but needs to start from 8. (Student is not able to consistently start count from any number in the sequence.)	Student counts to 20 starting from 8 or from 1 but is unable to count to 30.	Student is unable to count to 20 starting from 1. Errors might include confusion of teen numbers with -ty numbers (e.g. 13 versus 30), or skipping numbers.
Commentary: Students should be able to count to 30 by the end of the first trimester starting from any number in the sequence, and can count by tens to at least 50. This ability to start the count from any number is foundational for learning to use a count on method.			

Numeral Reading

Number Sense: Numeral Identification

2. Numeral Identification Cards: Place cards in front of child one at a time (not in numerical order). Say, **“Read this card to me.”** (check if correct; record incorrect answers)

7 18 12 6 20 15 10

3	2	1
Fluently and correctly reads all numbers.	Correctly identifies all numbers 10 and under, but is unable to identify the teen numbers and/or 20 or does so with self-corrections, delays, or counting up to recall.	Misidentifies one or more of the numbers 10 or less.
Commentary: By midyear, most instructional materials will assume that students can read numerals to 20. What this means is that if students are still struggling with reading numerals they are at risk of not being able to adequately access the instructional materials and so therefore are prone to falling further behind. Students who cannot read the numerals 1 – 10 by this point often have already come to the attention of the teacher for their progress in reading as well. Some schools will recognize this connection and will utilize other language support teachers, literacy and English Language Acquisition specialists to support students in developing fluency with numeral recognition. Do students count up to the number in order to remember its name? This is a common strategy that some students will develop spontaneously. For this assessment students who successfully use that strategy score at a level two.		



Kindergarten: Midyear

Counting, Cardinality:

Number Sense: One to One Correspondence

3. Put 12 counters in front of the student without them overlapping. “How many counters are here?” Allow the student to count. When finished, ask “How many are there?”

*If the student is unsuccessful say, “Count them again carefully, and touch each one as you count.” Once the count is complete, ask again, “How many are there?”

3	2	1
Student demonstrates 1-to-1 correspondence to 12 and cardinality. (i.e. Student does not recount when asked, “How many?” after initial count.)	Student is inconsistent in their demonstration of 1-to-1 correspondence. AND/OR Cardinality Check: When, after the initial count, the student is again asked, “How many?” the student recounts to respond.	Student is unable to demonstrate 1-to-1 correspondence to 12.

Commentary: Most students will have demonstrated proficiency with 1-to-1 correspondence to 12 by mid-kindergarten. For students who do not score a 3 on this task, notice to which number they are successful. It is an issue with coordinating actions, (counting and touching) or perhaps it is an issue with the number word sequence. Notice carefully, so that the issue(s) can be targeted specifically with direct, corrective instruction.

Addition and Subtraction:

Number Sense: Covered Tasks – Addition

4. Prepare 6 counters and a cover. Say, “I am taking 6 counters now. Count with me. ‘1, 2, 3, 4, 5, 6.’” Put the counters neatly in a line as you count them. Cover them with something. “How many counters are under here?” The student should confirm that there are 6. If not, recount them with the student and ask again.

After they are covered, get two more counters, show them to the student and say, “Now I am putting 2 more counters under here with the other 6. How many are under here now?” Put the 2 new counters with the other 6.

- If the student is not successful, attempt the same problem again starting with only 4 counters and adding 2.

3	2	1
Student is able to solve the problem $6 + 2$	Student is unable to solve $6 + 2$, but is successful with $4 + 2$.	Student is unsuccessful with both problems.

Commentary: Students may solve this problem in a variety of ways. Some students will repeat the count of the 6 objects, starting from 1. Others will count on from the 6. This task, with the prompt that the teacher provides of the original 6 is intended to provide a strong scaffold to support counting on. Notice the strategies that the student uses. Starting from 6 makes this problem a little trickier, since students who are developing ways to use fingers will need to represent the first number with both hands. Lowering the first addend to 4 in the second tasks makes it possible for the student to represent each number on a separate hand, which is significantly easier for many students.

This task is a sequel to the “turn the plate and add a few more” task from the fall and is designed to determine which students have begun to be able to operate off a given number without needing to recount the set. The count up to six provides a significant scaffold. If you have students for whom you feel that this count up is not required in order for them to be successful the teacher may choose to skip the count up six and simply say, “I have six” and cover them without the count. If they are unsuccessful at that point provide the count up to six.



Kindergarten: Midyear

Addition and Subtraction: Number Sense: Covered Tasks - Subtraction

5. "I am going to get 6 counters. Count with me." Have the student count with you as you take 6 and then place them under a cover. "Now I have 6 counters." Remove 2 from under the cover and leave them visible on the table. "I am taking 2 out from under the cover. How many do I still have under here?"

- If the student is unsuccessful, reestablish that you have six. "I have 6 again. Count them with me. 1, 2, 3, 4, 5, 6." Cover them. Remove 1 counter. "I am taking 1 out." Leave the one counter on the table in front of the student. "Now how many are still under the cover?"

3	2	1
Student answers 6 – 2 correctly.	Student solves second problem (6 – 1) but not the initial problem.	Student is unable to answer correctly.
<p>Commentary: Students should develop the ability to take away 1 or 2 from any number under 9 by about this time in the year. For this reason, the ability to count back from 10 is very important, as this is the way that most students will approach this problem. Observe closely for finger usage. For students who create the 6 on their fingers and then drop one and recount from 1 we are going to score that here as a level 3, however, recognize that this strategy is one that will only support students with subtraction problems that are in finger range. Activities that encourage students to develop a count back strategy for subtraction are strongly encouraged, including songs like "5 Little Ducks" and "Monkeys on the Bed" and "Monkeys Swinging in the Tree."</p>		

Addition and Subtraction

Number Sense: Use Objects to Model Addition and Subtraction Under 20

6. Show the $2 + 3$ card to the student. Say, "Read this card." (Ensure that the student reads accurately and correct them if they do not.) "Show me how you could solve the problem using these counters." Provide the student with more than enough counters.

3	2	1
Student uses the counters to show a group of 2 and a group of 3 and solves the problem accurately.	With additional questioning, the student is able to represent and solve the problem with the counters.	Student is unable to create a situation that matches the problem.
<p>Commentary: Students will display a wide variety of behaviors as they engage with this problem. While the previous problems start with the materials to assess students' ability to solve problems in the context of materials, this problem is designed to assess whether students are making sense of problems that are presented symbolically.</p> <p>Observe the students carefully and question as necessary to determine if the students see that the sum of the addends results from grouping the objects together. Questions like, "Where is the 5?" Can help in determining this. Some students will quickly respond 5 when the card is presented. This is good, but it is not sufficient for scoring a 3 on this task. This task is designed to determine if the student can make the connection to the materials and quantities involved.</p>		

Kindergarten: Midyear

Universal Screener for Number Sense

Quick Script, *print 1 copy/test administrator*

Forward Number Word Sequences

1. **“Let me hear you start counting from 17.”** Allow student to count to at least 30.
If student is unsuccessful say, **“Start counting from 8 and I’ll tell you when to stop.”** Allow student to count to at least 30.
If student is not successful starting from 8, have the student start from 1.

Numeral Reading

2. Numeral Identification Cards: Place cards in front of child one at a time (not in numerical order). Say, **“Read this card to me.”**
cards: 7 18 12 6 20 15 10

Counting Cardinality

3. Put 12 counters in front of the student without them overlapping. **“How many counters are here?”**
Allow the student to count. When finished, ask **“How many are there?”**

If the student is unsuccessful say, **“Count them again carefully, and touch each one as you count.”** Once the count is complete, ask again, **“How many are there?”**

Addition and Subtraction

4. Prepare 6 counters and a cover.
Say, **“I am taking 6 counters now. Count with me. ‘1, 2, 3, 4, 5, 6.’** Put the counters neatly in a line as you count them. Cover them. **“How many counters are under here?”** The student should confirm that there are 6. If not, recount them with the student and ask again.
After they are covered, get two more counters, show them to the student and say, **“Now I am putting 2 more counters under here with the other 6. How many are under here now?”** Put the 2 new counters with the other 6.
If the student is not successful, attempt the same problem again starting with only 4 counters and adding 2.
5. **“I am going to get 6 counters. Count with me.”** Have the student count with you as you take 6 and then place them under a cover. **“Now I have 6 counters.”** Remove 2 from under the cover and leave them visible on the table. **“I am taking 2 out of my hand. How many do I still have under here?”**
If the student is unsuccessful reestablish that you have six. **“I have 6 again. Count them with me. 1, 2, 3, 4, 5, 6.”** Cover them. Remove 1 counter. **“I am taking 1 out.”** Leave the one counter on the table in front of the student. **“Now how many are still under the cover?”**
6. Show the $2 + 3$ card to the student. Say, **“Read this card.”** (Ensure that the student reads accurately and correct them if they do not.) **“Show me how you could solve the problem using these counters.”** Provide the student with more than enough counters.

For numeral dictation, written problem #1, read the following instructions:

“Write the number seven.” “Write the number five.” “Write the number ten.” “Write the number fifteen.”
“Write the number twelve.”



Kindergarten: Midyear

Universal Screener for Number Sense

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

Forward Number Word Sequences

1. “Déjame escucharte contar desde 17.” Allow student to count to at least 30. If student is unsuccessful say, “Comienza a contar del 8 y yo te aviso cuando parar.” Allow student to count to at least 30. If student is not successful starting from 8, have the student start from 1.

Numeral Reading

2. Numeral Identification Cards: Place cards in front of child one at a time (not in numerical order). Say, “Léeme la tarjeta a mí.”

cards: 7 18 12 6 20 15 10

Counting Cardinality

3. Put 12 counters in front of the student without them overlapping. “¿Cuántos contadores tengo aquí?” Allow the student to count. When finished, ask “¿Cuántos hay?”

If the student is unsuccessful say, “Cuéntalos de nuevo cuidadosamente, y toca cada uno mientras los cuentas.” Once the count is complete, ask again, “¿Cuántos hay?”

Addition and Subtraction

4. Prepare 6 counters and a cover. Say, “Yo estoy sacando ahora 6 contadores. Cuenta conmigo. ‘1, 2, 3, 4, 5, 6.’” Put the counters neatly in a line as you count them. Cover them. “¿Cuántos contadores están debajo?” The student should confirm that there are 6. If not, recount them with the student and ask again. After they are covered, get two more counters, show them to the student and say, “Ahora estoy poniendo 2 contadores más debajo aquí con los otros 6. ¿Cuántos tengo aquí debajo ahora?” Put the 2 new counters with the other 6. If the student is not successful, attempt the same problem again starting with only 4 counters and adding 2.
5. “Yo voy a conseguir 6 contadores. Cuenta conmigo.” Have the student count with you as you take 6 and then place them under a cover. “Ahora tengo 6 contadores.” Remove 2 from under the cover and leave them visible on the table. “Esto sacando 2 fuera de mi mano. ¿Cuántos todavía me quedan aquí debajo?” If the student is unsuccessful reestablish that you have six. “De nuevo tengo 6. Cuéntalos conmigo. 1, 2, 3, 4, 5, 6.” Cover them. Remove 1 counter. “Yo estoy sacando 1 afuera.” Leave the one counter on the table in front of the student. “¿Ahora cuantos están todavía bajo cubierta?”
6. Show the 2 + 3 card to the student. Say, “Lee esta tarjeta.” (Ensure that the student reads accurately and correct them if they do not.) “Enséñame como tu resolverías el problema usando estos contadores.” Provide the student with more than enough counters.

For numeral dictation, written #1, read the following instructions: “Escribe el número siete.” “Escribe el número cinco.” “Escribe el número diez.” “Escribe el número quince.” “Escribe el número doce.”



Kindergarten: Midyear

Universal Screener for Number Sense

Standards Alignment and Scoring Guides for Written Tasks, *print 1 copy/test administrator*

W1. Writing Numbers: K.CC.A.3

Number Sense: Forward Number Word Sequences

For the first question, say: “Write the number seven.” “Write the number five.” “Write the number ten.” “Write the number fifteen.” “Write the number twelve.” Prompt for other numbers as necessary to determine level of proficiency.

3	2	1
Student writes all numbers under 10 and usually to 20. Might include occasional transpositions or reversals.	Student can write numbers under 10 but not all numbers to 20. Might include some reversals and transpositions	Student is unable to write the numbers under 10.
<p>Commentary: Many kindergarten students are well on their way to writing all numbers under 20 by midyear. Students who are struggling with transpositions (e.g. 31 is written when asked to write 13) or reversals (backward numbers) should be encouraged to correct those. Students should be accurately writing numbers to 20 by the end of the school year.</p> <p>NOTE: It is important to pay attention to the ways that students write numbers to ensure that they use the correct stroke sequence (i.e. the number 0 should be started at the top of the number).</p>		

W2. Counting objects and writing numerals– K.CC.A.3, K.CC.B.5

Number Sense: Cardinality

3	2	1
Both answers correct	Student correctly writes one of the numbers, but not both. Or student is able to correct work when asked to check an answer.	Student is unable to accurately write numbers to match the images.
<p>Commentary: Students should be able to correctly write numbers to represent groups of at least 10 things presented in an organized fashion.</p>		

W3. Draw a set of 7– K.CC.B.4

Number Sense: Cardinality

3	2	1
Student answers correctly on first attempt.	When administering the assessment, if the student does not draw 7 balls, ask the student to check their answer. If they are able to correct their drawing score a 2.	Student does not draw 7 balls.
<p>Commentary: Students should be able to correctly create drawings or sets of objects to match a quantity presented numerically.</p>		

W4. Addition tasks - CCSS: K.OA.A.5

Number Sense: Structures, Flexibility and Fluency

3	2	1
4 correct	2 - 3 correct	0 - 1 correct.



Kindergarten: Midyear

W5. Subtraction tasks- K.OA.A.5

Number Sense: Structures, Flexibility and Fluency

3	2	1
4 correct	2 - 3 correct	0 - 1 correct.
Commentary: Students solve addition and subtraction problems within 5. Students might use a variety of strategies to do so, including using fingers, making drawings, using objects, or other. By the end of the year students should be able to solve these problems fluently without the need for counting, drawings, or objects.		

W6. Number Line: K.MD

Number Sense: Number Lines

3	2	1
Both correct	One correct	None correct
Commentary: Students should begin to develop an understanding of number lines and the way that they are used to represent whole numbers under 20. In particular, they should begin to understand that consecutive numbers are separated by even spaces, and that the tick marks represent where a number lies on the number line. Some students will not recognize that the 6 has been skipped on this number line.		

Sample
Not For Distribution



Kindergarten: Midyear

Universal Screener for Number Sense

Interview Note Catcher, *print 1 copy/student*

Name: _____
Date: _____ Teacher: _____
Language: <input type="checkbox"/> English <input type="checkbox"/> Spanish <input type="checkbox"/> Other: _____

<u>Verbal Counting</u>	score
<p>1. Counting to 30. (from 17, or 8 or 1 if necessary) <i>Notes:</i></p> <p><input type="checkbox"/> student counts fluently to 30 starting from 17: 3 pts <input type="checkbox"/> student counts to 30, but not fluently or from any number: 2 pts <input type="checkbox"/> student is able to count to 20, not 30: 1 pt <input type="checkbox"/> student cannot count to 20: 0 pts</p>	
<u>Numeral Reading</u>	score
<p>2. "Read these numbers." (7, 18, 12, 6, 20, 15, 10) <i>Notes:</i></p> <p><input type="checkbox"/> all correct: 3 pts <input type="checkbox"/> all under 10 correct: 2 pts <input type="checkbox"/> misidentifies number under 10: 1 pt</p>	
<u>Counting and Cardinality</u>	score
<p>3. Count set of 12. <i>Notes:</i></p> <p><input type="checkbox"/> correct: 3 pts <input type="checkbox"/> inconsistent: 2 pts <input type="checkbox"/> does not demonstrate 1:1 correspondence: 1 pt</p>	
<u>Addition and Subtraction</u>	score
<p>4. $6 + 2$ <i>Notes:</i></p> <p><input type="checkbox"/> solves $6 + 2$: 3 pts <input type="checkbox"/> cannot solve $6 + 2$, solves $4 + 2$: 2 pts <input type="checkbox"/> does not solve either: 1 pt</p>	
<p>5. $6 - 2$ <i>Notes:</i></p> <p><input type="checkbox"/> solves $6 - 2$: 3 pts <input type="checkbox"/> cannot solve $6 - 2$, solves $6 - 1$: 2 pts <input type="checkbox"/> does not solve either: 1 pt</p>	
<p>6. Solve $2 + 3$ with materials <i>Notes:</i></p> <p><input type="checkbox"/> uses counters and solves accurately: 3 pts <input type="checkbox"/> needs support: 2 pts <input type="checkbox"/> does not demonstrate: 1 pt</p>	



Kindergarten: Midyear

Universal Screener for Number Sense

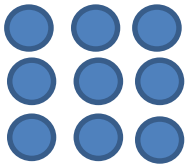
Written Portion, *print 1 copy/student*

Name _____ Date _____

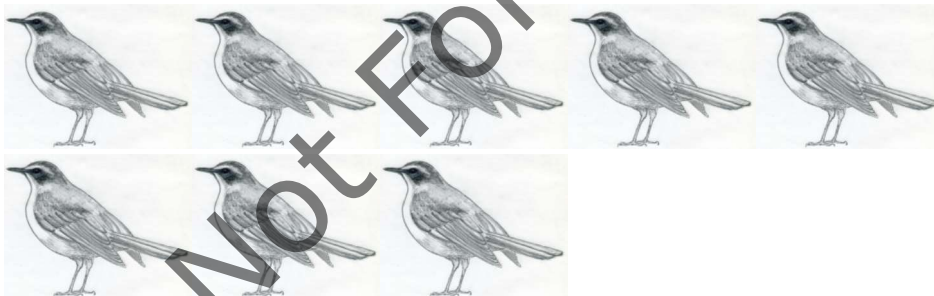
1. Write the numbers in the boxes as your teacher says them.

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2. How many circles?



How many birds? _____



3. Draw 7 balls.

Kindergarten: Midyear

4. Solve these problems. Add.

$4 + 1 = \square$

$2 + 0 = \square$

$1 + 3 = \square$

$2 + 3 = \square$

5. Solve these problems. Subtract.

$3 - 1 = \square$

$4 - 4 = \square$

$5 - 2 = \square$

$2 - 1 = \square$

6. Number lines. What numbers go in the boxes?



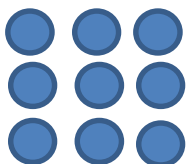
Kindergarten: Midyear

Nombre _____ Fecha _____

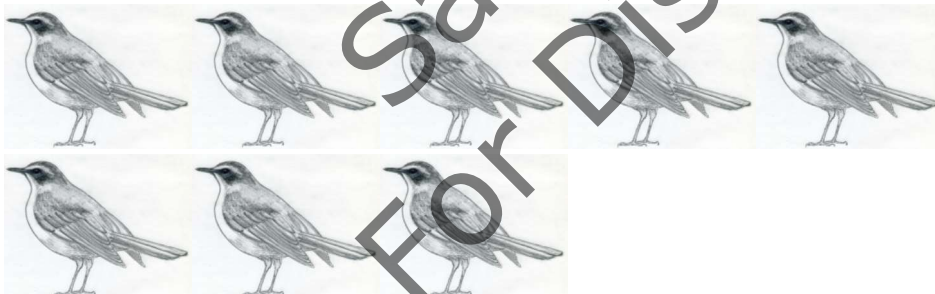
1. Escribe los números en las cajas como el Maestro los dictara.

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2. ¿Cuántos círculos?



¿Cuántos pájaros? _____



3. Dibuja 7 pelotas.

Kindergarten: Midyear

4. Resuelve estos problemas. Suma.

$4 + 1 = \square$

$2 + 0 = \square$

$1 + 3 = \square$

$2 + 3 = \square$

5. Resuelve estos problemas. Resta.

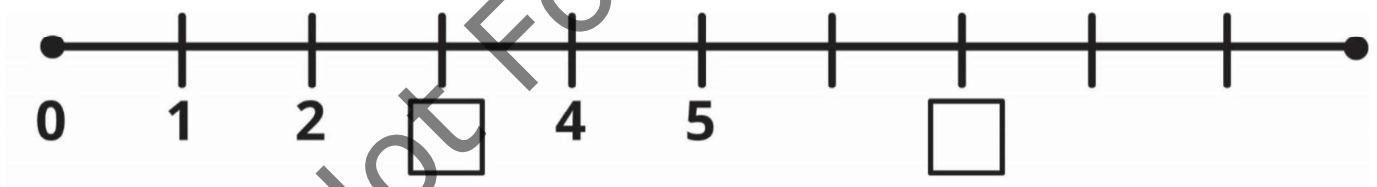
$3 - 1 = \square$

$4 - 4 = \square$

$5 - 2 = \square$

$2 - 1 = \square$

6. Líneas numéricas. ¿Qué números corresponden en las cajas?



Grade 2: Spring

Universal Screener for Number Sense

Instructions and Guidance

Interview 5 – 8 minutes each

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

This 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.

Who? Whenever possible, the teacher who works most directly with the child should be the one to administer the interview portion of the screener and score the written portion.

Limit Questioning: It is usually best to attempt to limit questioning and move at a steady pace through the tasks. This improves the efficiency, but also helps to ensure the consistency of administration, and therefore the reliability of the results.

Be flexible. You might find that you can work most efficiently by administering one task at a time, moving from student to student rather than having them come to a station. This can be done with the counting tasks and numeral ID task. Users of Forefront will find that the interview tool can be switched to focus on tasks. Here is a help article for using [the interview tool](#).

Collaborate. Sometimes groups of students can be reorganized in creative ways to provide one teacher with the ability to sit with individual students.

Watch carefully and take notes. The nuances in behaviors that reveal a child's number sense development are sometimes hard to see and hear.

Video tape. Although it is not necessary for the administration of the assessment, recording an assessment or two to discuss with colleagues can be an excellent way to learn together and build consistency in administration and scoring.

Written Portion – Provide a 60-minute class period. Many students will finish in 30 minutes or less.

The written portion of this assessment is best given in small groups or centers. Care should be taken to ensure that students are not given opportunities to collaborate on the assessment.

Unlike the interview section, it is less important who manages the administration of the written portion. That is, it is appropriate that the written portion be administered by a paraeducator or volunteer, however it is still best for the teacher to score the written portion of the assessment.

Teachers may read the assessment to the students. Ideally, students who are able to read the assessment independently should be given the opportunity to do so and those students who need support with the reading will be given that support either individually or in small groups.

Do not provide calculators.

For written tasks, provide manipulatives that are familiar to the student as needed.



Grade 2: Spring

Universal Screener for Number Sense

Detailed Script and Rubrics, *print 1 copy/test administrator*

1. Count from 697 – 702

Number Sense: Forward Number Word Sequences

“Start counting at 697 and I will tell you when to stop.” (Stop at 702)

- If student is unsuccessful prompt the student to make a second attempt saying, “Let me hear that one more time.”
- If student is still unsuccessful say, “Let’s do one more count. This time I’d like you to start at 98 and continue counting.” (Stop at 112.)

3	2	1	0
Student is able to successfully complete count from 697 on first attempt.	Student correctly counts from 697 on a second attempt. Or on first attempt with pauses and/or self-corrections.	Student is unsuccessful with the count from 697, but does successfully count from 98 to 112	Student is not successful with either count.

Commentary: The ability to count verbally is a very strong indicator of number sense. This task is a continuation of previous verbal counting tasks. The count from 697 to 702 reveals an understanding of place value and the number system. While earlier counts (e.g., 1 – 20) are rote, memorized sequences, counts in the higher numbers are not memorized in the same way. To complete these counts students rely on the patterns of place value.

For students who perform at a level 0 on this tasks, further assessments should be performed to determine the extent of the student’s verbal number sequence and additional instruction and opportunities for targeted practice should be provided.

For students who score at a level 1, who demonstrate that they can count from 98 – 112, but are unsuccessful when counting from 697 – 702, it implies that there is a memorized sequence that has not yet been generalized so that it can apply to larger numbers and other counts. Help the student to see the patterns, and support them in making connections.

2. Count Back from 302

Number Sense: Backward Number Word Sequences

“Count back by ones from 302.” (Stop at 296)

If the student starts counting forward instead of backward, stop the student and say, “That is counting forward. This time we are counting backward, like 3, 2, 1.”

- If student is unsuccessful say, “Ok let’s try another one. This time start at the number 113 and count back.” (stop at 98)
- If student is still unsuccessful say, “Let’s do one more. This time start at 23 and count back.” (Stop at 10)

3	2	1	0
Student is able to successfully complete the count from 302 - 296	Student is unable to count from 302 to 296, but does count from 113 – 98.	Student is unsuccessful with first two counts, but successfully counts back from 23 - 10	Student is not successful with any of the counts.

Commentary: Counting backward demonstrates a strong command of the counting sequence. It is highly correlated with proficiency in subtraction.



Grade 2: Spring

3. Read Numbers in the Hundreds

Number Sense: Numeral ID

“Read this number.” Show the numbers one at a time.

111 909 818 776 555

If the student reads any of the numbers incorrectly, you may present the number again to determine if a score of 2 is appropriate.

3	2	1
Student reads all numbers correctly and fluently	Student reads numbers correctly but has pauses or makes self-corrections.	Student cannot accurately read all numbers.

Commentary: As numbers increase in magnitude, the ability to read these numbers begins to become associated with place value. In addition to the understanding of the number system that this supports, the memorization of the names of the different places in order to accurately read numbers is an important skill for communication and for accessing instructional materials.

A note about reading numbers: Some students when reading numbers in the hundreds will insert an “and” after the hundreds. (e.g., eight hundred and eighteen.) For this assessment, score that as a correct reading. Similarly, if the student says, “a hundred eleven,” instead of the more formal “one hundred eleven,” this too should be considered as correct for this assessment.

4. Subtract 62 - 13

Number Sense: Place Value: Mental Math

Present the card 62 - 13. “Read this card.” (Make sure that the student reads accurately. Correct the student if they do not.) “Solve this problem.” Teacher may choose to ask, “How did you solve the problem?”

- If a student applies a procedure (e.g., drawing with a finger on the desk and reproducing the traditional algorithm), ask the student. “Why does that work?”
- If the student is unsuccessful, present the card 51-4. “Read this card.” (Make sure that the student reads accurately. Correct the student if they do not.) “Solve this problem.”
- If the student is unsuccessful with either of the previous tasks, present the card that says 21 - 3. (Again, make sure that the student reads accurately. Correct the student if they do not.) “Solve this problem.”

3	2	1	0
Student solves 62 - 13. (49) by subtracting a 10 and 3 ones, or a count back by 1s strategy. Student may correct themselves when explaining their strategy OR Student solves correctly using a traditional algorithm or other procedure, and explains why it works using ideas of tens and ones in their explanation.	Student solves 51 - 4, but not 61 - 13. OR Student solves 61 - 13 using a traditional algorithm but does not clearly explain using tens and ones.	Student solves 21 - 3, but neither of the previous two problems.	Student is not successful with any of the subtraction tasks.

Commentary: Listen for the strategies that the student uses in solving these problems. For the performance level 3 a count back by ones to solve 62 - 13 has been included. Although this is quite different from the preferred strategy of removing the 10 as a unit (e.g., 62 - 10 = 52) without counting the ten, keeping track of 13 counts back requires some strategy for keeping track of the 10 (e.g., fingers) demonstrating a sense of 10s that is the target of the problem. If student replicates a traditional algorithm (e.g., “I crossed out the 6 and put 1 here”). Listen carefully to their explanation. What this problem seeks to reveal is if the student understands the relationship of the 10s and 1s. If the student answers correctly but rotely applies a procedure, score at level 2.



Grade 2: Spring

5. Subtract 78 – 50 with Tens Strips

Number Sense: Ones, Tens and Hundreds

Show the student a 10 strip. **“I have these strips of dots. Each of these strips has 10 dots.”** Allow the student to count the dots if they would like. Take 7 strips of 10 and slide them in front of the student. Then slide the 8 dots next to the 7 strips. **“Here are 78 dots. I am going to cover these up.”** Cover with something. Place the number card “78” off to the side. **“I will put this number here to help you remember.”**

Reach under the cover and remove 5 of the ten-strips while preventing the student from seeing the remaining dots. Leave the 5 ten-strips on the table visible. **“There were 78, and I took 50 back out. How many dots are left under here?”**

If the student begins to attempt to solve by counting back by 1s, interrupt them and say, **“Counting back like that could solve the problem but that would take a long time. Do you have another way to solve it?”** Ask the student to explain their strategy if it is not evident or if the student answers incorrectly.

3	2	1
Student answers 28.	Student solves the problem but makes self-corrections while solving or when asked to explain strategy.	Student is unsuccessful.
<p>Commentary: Operating with tens and ones is a major goal of 2nd grade and is fundamental for the continued success with the conceptualization of place value. Students should be able to add ones and tens with relative ease at this time. When students are struggling with these concepts it is important to provide visual models to support their development. When students have developed ways of solving multi-digit subtraction problems using procedures, they can often arrive at correct answers without truly understanding the tens and ones, which can lead to errors and confusion when they apply the procedures to solve more difficult problems. For example, when presented symbolically many students will say “seven minus five is two,” without really having developed an understanding of tens and ones.</p>		

6. Add 198 + 10: CCSS

Number Sense: Place Value: Mental Math

Show the card that says $198 + 10$. **“Read this card to me.”** Ensure that the student has read the card correctly and correct them if necessary. **“How much is 198 plus 10?”** Teacher may choose to ask, **“How did you solve the problem?”**

3	2	1
Student solves the problem using the ten, or the student adds 2 and then 8.	Student counts by ones to solve the problem. And/or student makes self-corrections while solving or when explaining their strategy.	Student is unsuccessful.
<p>Commentary: While the two prior tasks focus on tens and ones under 100, this task probes the student’s understanding of tens and hundreds.</p>		



Grade 2: Spring

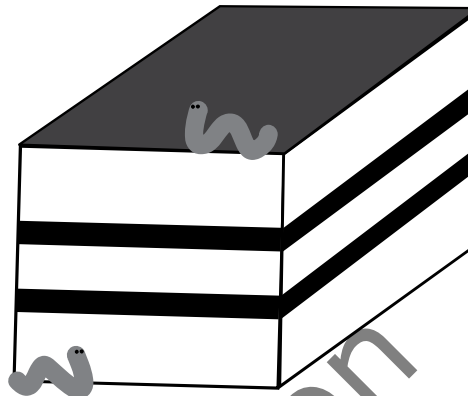
Universal Screener for Number Sense

Standards Alignment and Scoring Guides for Written Tasks, *print 1 copy/test administrator*

W1: Story 72 – 58

Number Sense: Problem Solving - Add/Subtract

Karen had 72 worms in a box in her garden. When she checked it the next day there were only 58. How many worms escaped? Show how you solved the problem and write an equation to explain your thinking.



A variety of equations or expressions are acceptable. Students can represent the unknown with a letter, a box, ?, or a blank. Or student can have the answer in their equation. **Answer: 14**

Equation: $72 - 58 = w$, $58 + w = 72$, $72 - w = 58$, or other acceptable answer (see commentary)

3	2	1
Student accurately solves the problem, provides an accurate equation, and explains logic in words, pictures or numbers.	Student does 2 of the following 3. <ul style="list-style-type: none"> Student accurately solves the problem. Student explains how they solved the problem in a way that did or could lead to an accurate solution using words, pictures and/or numbers. An accurate equation or expression 	The student's work is below a level 2.

Commentary: The problem presented here represents one of the many problem types that students are expected to solve in 2nd grade. The ability to apply mathematics in context is a major indicator of number sense.

Students may show how they solved the problem in a wide variety of ways. Look for viable strategies that correctly match the situation and which justify the answer given. If the student only uses numbers to explain their solution, accept that as a reasonable solution (words and pictures are not mandatory).

This question directs students to represent the situation with an equation and explanation. Some students will write multiple equations that they used to solve the problem. (e.g., $72 - 8 = 64$ and $64 - 50 = 14$) These kinds of responses should be counted correct. Students do not need to put a letter for the unknown. Blanks or boxes or equations that provide the full solution (e.g., $72 - 58 = 14$) are acceptable level 3 responses.

If a student creates an equation that is not balanced, that is something like $72 - 50 = 22 - 8 = 14$, this should not be scored as a correct equation because $72 - 50 \neq 22 - 8$. This error should be noted and addressed through instruction.

Grade 2: Spring

W2. Story 15 + S = 46 Number Sense: Problem Solving – Addition/Subtraction

Kevin has a collection of stamps. He got 15 new stamps for his birthday. Now he has 46 stamps in his collection. How many stamps were in his collection before he got the 15 stamps for his birthday? Show how you solved the problem and write an equation to explain your thinking.

A variety of equations or expressions are acceptable. Students can represent the unknown with a letter, a box, a ?, or a blank. Or student can have the answer in their equation. **Answer: 31**

Equation: $15 + s = 46$, $46 - 15 = s$, or other acceptable equation

3	2	1
Student accurately solves the problem, provides an accurate equation, and explains reasoning in words, pictures or numbers.	Student does 2 of the following 3. <ul style="list-style-type: none"> • Student accurately solves the problem. • Student explains how they solved the problem in a way that did or could lead to an accurate solution using either words pictures or numbers. • An accurate equation(s) or expression (s) 	The student's work is below a level 2.

Commentary: This problem represents another of the problem types that students are expected to solve in 2nd grade. The ability to apply mathematics in context is a major indicator of number sense.

Students may show how they solved the problem in a wide variety of ways. Look for viable strategies that correctly match the situation and which justify the answer given. If the student only uses numbers to explain their solution, accept that as a reasonable solution (words and pictures are not mandatory).

This question also asks students to represent their solution with an equation and explanation. Some students will write multiple equations that they used to solve the problem. (e.g., $15 + 30 = 45$ and $45 + 1 = 46$) These kinds of responses should be counted as correct.

If a student creates an equation that is not balanced, that is something like $15 + 30 = 45 + 1 = 46$ this cannot be a level 3 response. While this does show number sense, the equation is incorrect ($15 + 30 \neq 35 + 1$). This should be noted and addressed through instruction.



Grade 2: Spring

W3. Addition Fluency under 100 Number Sense: Place Value – Solve Written Problems

Show two or more different ways to solve. $35 + 36 =$ _____

3	2	1
Student demonstrates at least two distinct strategies for arriving at the correct solution. (see commentary below)	Student shows one distinct strategy of arriving at the correct solution.	Student does not give the correct solution.

Commentary: The ability to fluently solve addition problems is a major goal of 2nd grade. The three attributes of fluency include: accuracy, flexibility, and efficiency. Flexibility and accuracy are the focus of this question. Flexibility in computation central to number sense.

It is important that teachers look for two distinctly different strategies. Below is a list of the most frequent strategies. There are others.

Tens then Ones or Ones then Tens (count each as distinct strategy)

- $30 + 30 = 60$ and $5 + 6 = 11$ and $60 + 11 = 71$, so $35 + 36 = 71$
- $5 + 6 = 11$ and $30 + 30 = 60$ and $60 + 11 = 71$, so $35 + 36 = 71$

Partial Sums: Although the partial sums (or “show all sums”) method is functionally identical to the Tens and Ones or Tens then Ones method above, it is considered a distinct strategy for this assessment.

$$\begin{array}{r} 36 \\ + 35 \\ \hline 11 \\ 60 \\ \hline 71 \end{array}$$

Tens and Ones then More Ones

- $30 + 30 = 60$ put the 5 back on so $30 + 35 = 65$, and $65 + 6 = 71$

Jumps of Tens and Ones or Ones and Tens (count each as distinct strategy)

This strategy is often modeled using a number line.

- $35 + 30 = 65$ and $65 + 6 = 71$, so $65 + 6 = 71$
- Or $35 + 6 = 41$ and $41 + 30 = 71$, so $65 + 6 = 71$

Traditional Algorithms (these are all representations of the same distinct strategy and should be counted as one distinct strategy even if the child uses two of these.)

$$\begin{array}{r} 35 \\ + 36 \\ \hline 71 \end{array} \quad \text{or} \quad \begin{array}{r} 35 \\ + 36 \\ \hline 71 \end{array} \quad \text{or} \quad 35 + 36 = 71$$

Build off 35s

- $35 + 36 = 35 + 35 + 1 = 70 + 1 = 71$

Count by Ones (either count all or count on)

Drawing all should be discouraged by this point, however if a student does choose to draw all thirty-five and/or thirty-six, count this as one distinct strategy regardless of whether they just count on, or if they count all seventy-one.



Grade 2: Spring

Commentary #3 Continued:

A note about representations:

The strategies above might be represented in a wide variety of ways. For expediency and succinctness, they are only described numerically above.

However, students might show strategies in a variety of ways:

- numerically
- drawings of base ten blocks
- number lines
- verbal descriptions

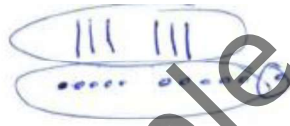
Although mathematically one could argue that the example below shows only one strategy shown in two ways, for this assessment, different representations may be considered distinct strategies.

The example here shows two distinct strategies:

Strategy 1

$$\begin{aligned} 30 + 30 &= 60 \\ 5 + 6 &= 11 \\ 60 + 11 &= 71 \end{aligned}$$

Strategy 2



Do not count using the commutative property as two distinct strategies.

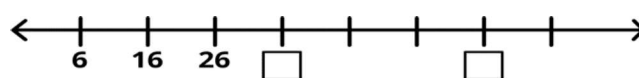
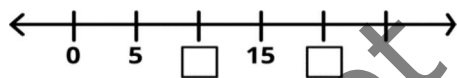
For example, the two shown below represents only one distinct strategy.

$$\begin{array}{r} 36 \\ + 35 \\ \hline 71 \end{array} \quad \text{and} \quad \begin{array}{r} 35 \\ + 36 \\ \hline 71 \end{array}$$

W4. Place Numbers on Number Line

Number Sense: Number Lines

What number best goes in each of the empty boxes on the number lines below?



3	2	1
Student has all numbers correct on both number lines.	Student has one incorrect answer	Student has more than one incorrect answer.
Answers: 10, 20 and 36, 66		

Commentary: These two number line tasks assess students' general ability to work with number lines. In this case these tasks related to skip counting and equal intervals. Student should be fully able to use number lines with whole numbers by this point; in third grade students will use number lines to develop initial understandings of fractions.

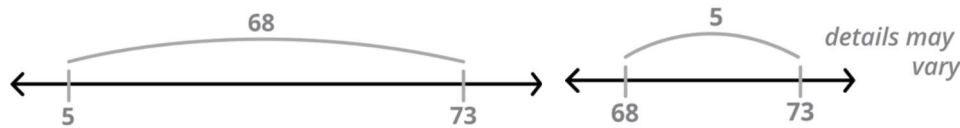


Grade 2: Spring

W5. Represent Addition and Subtraction on a Number Line

Number Sense: Place Value: Create Representations

Use the number line below to show $73 - 68 = 5$.



3	2	1
<p>Student has made an accurate representation of the subtraction problem. Ideally the student has shown the problem as a difference problem (as opposed to a takeaway problem)</p>	<p>Student has accurately represented the problem, however the numbers increase in value from right to left rather than the standard left to right. OR Student has attempted to show 73 and/or 68 individual ones on the number line. (i.e. a count-by-ones strategy.)</p>	<p>Student has not accurately represented the subtraction problem.</p>
<p>Commentary: The range of possible answers to this problem can make it difficult to score. In general, if the student has clearly represented the problem and the work clearly matches the equation it should be considered level 3. When student work presents an “approximation” of the situation, and there are problems with the representation that suggest that the student is perhaps confused about some aspect of the representation, it should be scored as a 2. When the representation is missing numbers, or the numbers don’t relate to the problem. If, for example, the student put the number 5, the number 68 and the number 73 onto the line, but there is no indication of the relationship of these three numbers, this should be considered an example of a level 1 response.</p>		

Grade 2: Spring

Universal Screener for Number Sense

Quick Script, *print 1 copy/test administrator*

1. Verbal Counting

“Start counting at 697 and I will tell you when to stop.” (Stop at 702)

- If student is unsuccessful: “Let me hear that one more time.”
- If student is still unsuccessful: “Let’s do one more count. This time I’d like you to start at 98 and continue counting.” (Stop at 112.)

2. Backward Counting

“Count back by ones from 302.” (Stop at 296)

- If student is unsuccessful: “Ok let’s try another one. This time start at the number 113 and count back.” (stop at 98)
- If student is still unsuccessful: “Let’s do one more. This time start at 23 and count back.” (Stop at 10)
- If student counts forward instead of backward, say: “That is counting forward, this time we are counting backward, like 3, 2, 1.”

3. Read Numbers

“Read this number.” Show the numbers one at a time. 111, 909, 818, 776, 555

If a student reads incorrectly, give an opportunity if they may correct themselves.

4. Subtract

Present the card 62 - 13. “Read this card.” (Make sure that the student reads accurately. Correct the student if they do not.) “Solve this problem.” Teacher may choose to ask, “How did you solve the problem?”

- If a student applies an procedural algorithm: “Why does that work?”
- If the student is unsuccessful, present the card 51-4. Read this card.
- If the student is unsuccessful with either of the previous tasks, present the card that says 21 - 3. (Again, make sure that the student reads accurately. Correct the student if they do not.) “Solve this problem.”

5. Subtract Tens

Show the student a 10 strip. “I have these strips of dots. Each of these strips has 10 dots.” Allow the student to count the dots. Take 7 strips of 10 and slide them in front of the student. Then slide the 8 dots with the 7 strips. “Here are 78 dots.” I am going to cover these up.” Cover with something. Place the number “78” off to the side. “I will put this number here to help you remember.”

- Remove 5 of the 10-strips. “There were 78, and I took 50 back out. How many dots are left under here?”
- If the student begins to attempt to solve by counting back by 1s, interrupt them and say, “Counting back like that could solve the problem but that would take a long time. Do you have another way to solve it?”

6. Add Tens

Show the 198 + 10. “Read this card to me.” Ensure that the student has read the card correctly and correct them if necessary. “How much is 198 plus 10?” Teacher may choose to ask, “How did you solve the problem?”



Grade 2: Spring

Universal Screener for Number Sense

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

1. Contando Verbalmente

“Comienza contando del 697 y yo te diré cuando parar.” (Para al 702)

- Si el estudiante no es exitoso: “Déjame escuchar eso una vez más.”
- Si la estudiante continua sin éxito: “Vamos a contar una vez más. Esta vez me gustaría que comiences al 98 y continúa contando.” (Para al 112.)

2. Contando hacia atrás

“Cuenta hacia atrás por unos desde 302.” (Para al 296)

- Si el estudiante no es exitoso: “Ok vamos a tratar otra. Esta vez comienza del número 113 y cuenta hacia atrás.” (Para al 98)
- Si la estudiante continua sin éxito: “Vamos a hacer una más. Esta vez comienza al 23 y cuenta hacia atrás.” (Para al 10)
- Si el estudiante cuenta hacia adelante en lugar de hacia atrás: “Eso es contando hacia adelante, esta vez estamos contando hacia atrás, como 3, 2, 1.”

3. Leyendo Números

“Lee este número.” Demuestre los números uno a la vez. 111, 909, 818, 776, 555

Si el estudiante lo lee incorrectamente, provea la oportunidad si cree que se pueda corregir por sí solo.

4. Sustracción

Presente la tarjeta 62 - 13. “Lee esta tarjeta.” (Asegúrese de que el estudiante lea con precisión. Corríjalo si no lo hace.) “Resuelve este problema.” ¿El maestro puede elegir de preguntar, “Como resolviste el problema?”

- Si un estudiante aplica un algorítmico procedimiento: ¿Porque eso funciona?”
- Si el estudiante no es exitoso, presente la tarjeta 51-4. Lee esta tarjeta.
- Si el estudiante no es exitoso con ninguna de las dos tareas anteriores, presente la tarjeta que dice 21 - 3. (De nuevo, asegúrese que el estudiante lea con precisión. Corrija al estudiante si no lo hace.) “Resuelve este problema.”

5. Sustrayendo en diez

Enseñe al estudiante una banda de 10. “Yo tengo estas bandas de puntos. Cada una de estas bandas tiene 10 puntos.” Permita al estudiante contar los puntos. Tome 7 bandas de 10 y deslícela adelante del estudiante. Después deslice los 8 puntos con las 7 bandas. “Aquí hay 78 puntos.” Yo voy a cubrir estas.” Cúbrelas con algo. Coloque el número “78” a un lado. “Yo voy a poner este número aquí para ayudarte a recordar.”

- Remueva 5 de las bandas de diez. “Habían 78, y yo saque 50 afuera. ¿Cuántos puntos han quedado aquí debajo?”
- Si el estudiante comienza a intentar en resolver contando hacia atrás por unos, interrúmpalo y dígame, “Contando hacia atrás así podría resolver el problema, pero eso tomaría mucho tiempo. ¿Tienes otra manera de resolverlo?”

6. Agregando Diez

Enseñe el $198 + 10$. “Léeme esta tarjeta.” Asegúrese de que el estudiante lea la tarjeta correctamente. Corríjalo si es necesario. “Cuanto es 198 más 10?” ¿El Maestro puede elegir si responder, “Como resolviste el problema?”



Grade 2: Spring

Universal Screener for Number Sense
Interview Note Catcher, *print 1 copy/student*

Name: _____
 Date: _____ Teacher: _____
 Language: English Spanish Other: _____

1. <u>Verbal Counting</u>	score
<p>“Start counting at 697 and I will tell you when to stop.” (Stop at 702.) If necessary: give second attempt or count from 98 to 112. <i>Notes:</i></p> <p><input type="checkbox"/> <i>fluent from 697: 3 pts.</i> <input type="checkbox"/> <i>less than fully fluent with 697 count or takes two attempts: 2 pts.</i> <input type="checkbox"/> <i>unsuccessful from 697t, successful with second: 1 pt.</i> <input type="checkbox"/> <i>unsuccessful with both counts: 0 pts</i></p>	
2. <u>Backward Counting</u>	score
<p>“Count back by 1s from 302.” (Stop at 296.) If necessary: count back from 113 or from 23 to 10. <i>Notes:</i></p> <p><input type="checkbox"/> <i>completes 302 to 296: 3 pts.</i> <input type="checkbox"/> <i>no count from 302 to 296, counts from 113 to 98: 2 pts.</i> <input type="checkbox"/> <i>first two counts unsuccessful, but counts back 23 to 10: 1 pt.</i> <input type="checkbox"/> <i>unsuccessful with all counts: 0 pts.</i></p>	
3. <u>Read Numbers</u>	score
<p>Read 111, 909, 818, 776, 555 <i>Notes:</i></p> <p><input type="checkbox"/> <i>all correct: 3 pts.</i> <input type="checkbox"/> <i>correct with pauses/self-corrects: 2 pts.</i> <input type="checkbox"/> <i>not all correct: 1 pt.</i></p>	
4. <u>Subtract</u>	score
<p>62-13 (51-4 and/or 21-3 if necessary) <i>Notes:</i></p> <p><input type="checkbox"/> <i>solves strategically: 3 pts.</i> <input type="checkbox"/> <i>solves 51-4 but not 61-13, or solves 61-13 without understanding: 2 pts.</i> <input type="checkbox"/> <i>student solves 21-3 only: 1 pt.</i> <input type="checkbox"/> <i>student solves no problems: 0 pts.</i></p>	
5. <u>Subtract Tens</u>	score
<p>78-50 dots <i>Notes:</i></p> <p><input type="checkbox"/> <i>correct: 3 pts.</i> <input type="checkbox"/> <i>solves problem with corrections: 2 pts</i> <input type="checkbox"/> <i>unsuccessful: 1 pt.</i></p>	
6. <u>Add Tens</u>	score
<p>198 + 10 <i>Notes:</i></p> <p><input type="checkbox"/> <i>solves strategically: 3 pts.</i> <input type="checkbox"/> <i>counts by 1s or has to self-correct: 2 pts</i> <input type="checkbox"/> <i>unsuccessful: 1 pt.</i></p>	



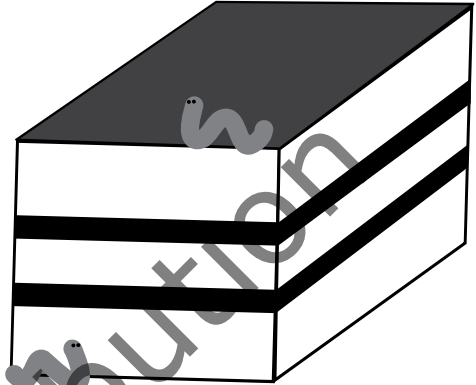
Grade 2: Spring

Universal Screener for Number Sense

Written Component, *print 1 copy/student*

Name _____ Date _____

1. Karen had 72 worms in a box in her garden. When she checked it the next day there were only 58. How many worms escaped? Show how you solved the problem and write an equation to explain your thinking.



Answer _____ worms

Equation _____

2. Kevin has a collection of stamps. He got 15 new stamps for his birthday. Now he has 46 stamps. How many stamps did he have before he got the 15 stamps for his birthday?

Show how you solved the problem and write an equation to explain your thinking.

Answer _____ stamps

Equation _____

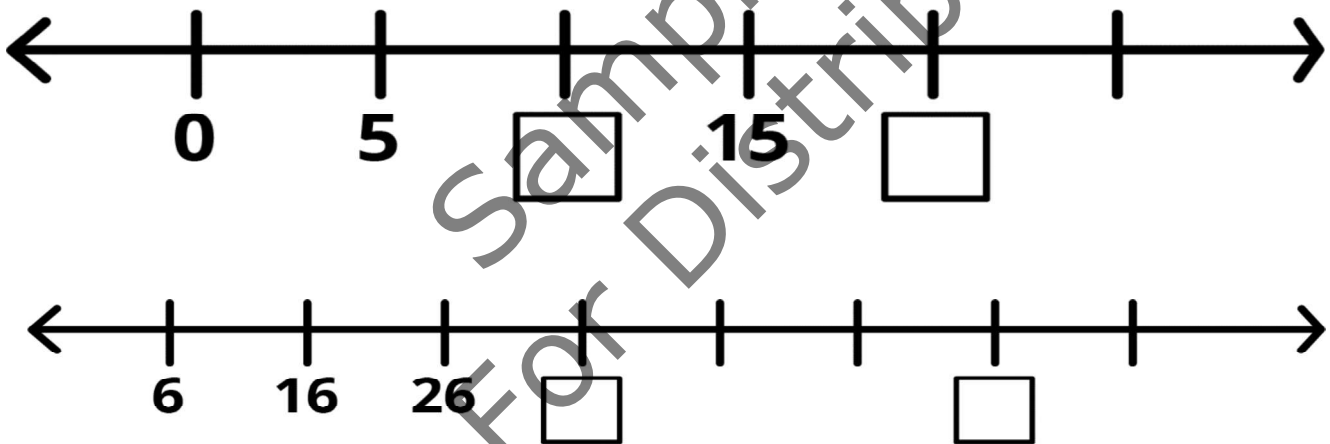


Grade 2: Spring

3. Show two or more different ways to solve.

$$35 + 36 = \underline{\hspace{2cm}}$$

4. What number best goes in the empty boxes on the number lines?



5. Use this number line to show $73 - 68 = 5$.



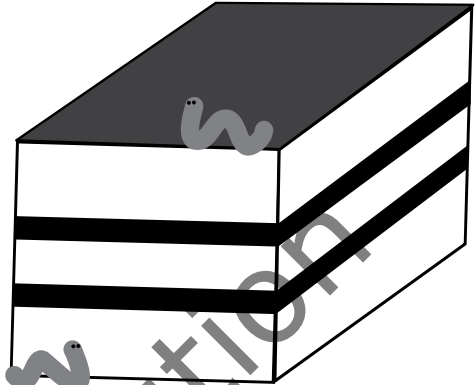
Grade 2: Spring

Universal Screener for Number Sense

Written Component, *print 1 copy/student*

Nombre _____ Fecha _____

1. Karen tenía 72 gusanos en una caja en su jardín. Cuando la chequeo al día siguiente solo habían 58. ¿Cuántos gusanos se escaparon? Demuestra como resuelves el problema y escribe una ecuación para explicar tu manera de pensar.



Respuesta _____ gusanos

Ecuación _____

2. Kevin tiene una colección de estampillas. Le dieron 15 estampillas por su cumpleaños. Ahora tiene 46 estampillas. ¿Cuántas estampillas él tenía antes de que le dieran 15 estampillas por su cumpleaños?

Demuestra como resuelves el problema y escribe una ecuación para explicar tu manera de pensar.

Respuesta _____ estampillas

Ecuación _____

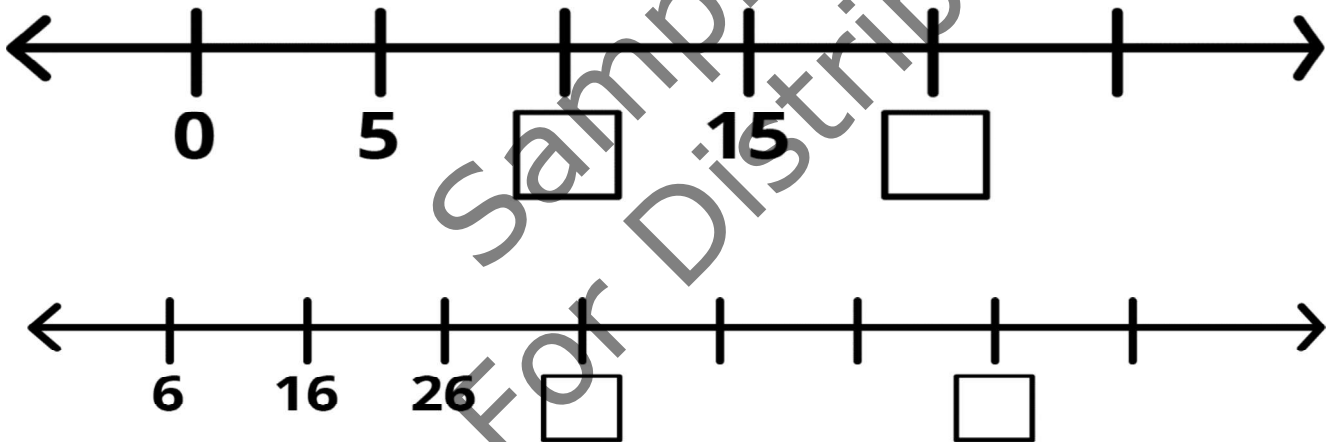


Grade 2: Spring

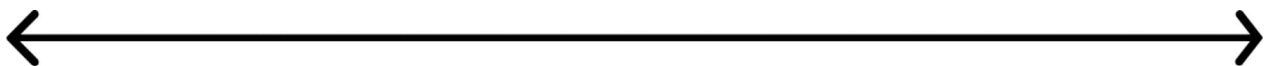
3. Demuestra dos o más maneras de resolverlo.

$$35 + 36 = \underline{\hspace{2cm}}$$

4. ¿Qué números van mejor en las cajas vacías en la línea numérica?



5. Usa esta línea numérica para demostrar $73 - 68 = 5$.



Grade 2: Spring

Universal Screener for Number Sense

Cards of interviews: One set per teacher

111

909

818

776

555

78

62-13

51-4

21-3

198 + 10

Grade 2: Spring

Universal Screener for Number Sense

Ten strips and 4 more. One set per teacher. Cut into individual strips.

