



6th Grade

Tier 2 Intervention Lessons

Readiness Standard 1 - 5.OA.1

Learning Target: I will evaluate number expressions using parentheses

Readiness for 6.EE.2c: Evaluate algebraic expressions

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IES Recommendations for Tier 2 and 3 intervention lessons:

| | |
|---|-----------------|
| 2. Instructional materials for students receiving interventions should focus intensely on in-depth treatment of whole numbers in kindergarten through grade 5 and on rational numbers in grades 4 through 8. These materials should be selected by committee. | Low |
| 3. Instruction during the intervention should be explicit and systematic. This includes providing models of proficient problem solving, verbalization of thought processes, guided practice, corrective feedback, and frequent cumulative review. | Strong |
| 4. Interventions should include instruction on solving word problems that is based on common underlying structures. | Strong |
| 5. Intervention materials should include opportunities for students to work with visual representations of mathematical ideas and interventionists should be proficient in the use of visual representations of mathematical ideas. | Moderate |
| 6. Interventions at all grade levels should devote about 10 minutes in each session to building fluent retrieval of basic arithmetic facts. | Moderate |
| 7. Monitor the progress of students receiving supplemental instruction and other students who are at risk. | Low |
| 8. Include motivational strategies in tier 2 and tier 3 interventions. | Low |

(Institute of Educational Sciences, Assisting Students Struggling with Mathematics: Response to Intervention (RtI) for Elementary and Middle Schools, 2009, p. 6)

Gradual release of responsibility model

Teacher Responsibility

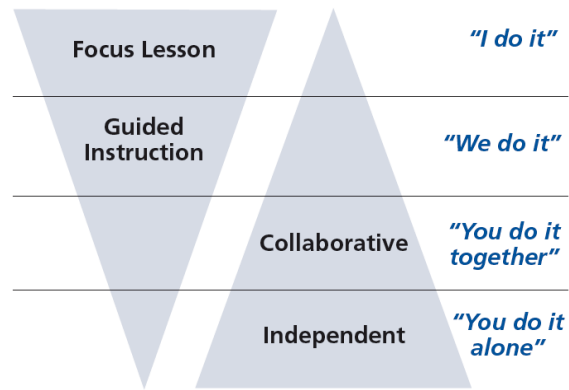


Figure 1

[\(Dr. Douglas Fisher, Effective Use of the Gradual Release of Responsibility Model\)](#)



Planning Guide: Session 1

6th Grade - Readiness Standard 1 - 5.OA.1

Learning Target: I will evaluate number expressions using parentheses

Readiness for evaluating algebraic expressions

| Recommended Actions | |
|-------------------------------|---|
| Beginning (15 min.) | <p><u>Review</u> the readiness standard with the intervention group using the Guided Review</p> <ul style="list-style-type: none">○ Introduce the learning target and why it is important for future learning○ Read each question on the Guided Review and ask students to share what they remember from the previous school year. |
| Middle (5 min.) | <ul style="list-style-type: none">➤ Ask students to <u>reflect</u> on their progress towards the learning target<ul style="list-style-type: none">○ What did I remember about the learning target?○ What did I learn today about the learning target?○ How confident do I feel about doing the learning target on my own? |
| End (10 min.) | <ul style="list-style-type: none">➤ <u>Assess</u> each student's progress using Quick Check – Form A➤ Guide students to self-correct their Quick Check – Form A➤ Guide students to <u>chart their progress</u> by recording the date and Quick Check score in their Growth Chart➤ Collect each student's Quick Check and Growth Chart |
| After | <ul style="list-style-type: none">➤ Create sub-groups to differentiate the middle of sessions 2 through 8<ul style="list-style-type: none">○ Group 1 – Include students who <u>did not</u> meet the learning goal○ Group 2 – Include students who met or exceeded the learning goal |



6th Grade Fall Guided Review

Readiness Standard 1 - 5.OA.1

Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses.

1.

Evaluate: $3 \times (2 + 5)$

- 10 11 21 30

2.

Evaluate: $8 - (4 - 1)$

- 7 5 4 3

3.

Evaluate: $(6 - 2) \times (3 + 4)$

- 4 16 28 56



6th Grade Winter Guided Review

Readiness Standard 1 - 5.OA.1

Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses.

1.

Evaluate: $4 \times (3 + 5)$

- 12 17 32 60

2.

Evaluate: $10 - (5 - 2)$

- 8 7 5 3

3.

Evaluate: $(8 - 2) \times (5 + 3)$

- 4 33 48 80



6th Grade Spring Guided Review

Readiness Standard 1 - 5.OA.1

Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses.

1.

Evaluate: $6 \times (3 + 4)$

- 13 22 36 42

2.

Evaluate: $9 - (4 - 3)$

- 8 6 5 2

3.

Evaluate: $(7 - 3) \times (2 + 6)$

- 7 20 32 80



Session 1: Self-Reflection

6th Grade - Readiness Standard 1 - 5.OA.1

Learning Target: I will evaluate number expressions using parentheses

Briefly discuss student responses

- What did I remember about evaluating expressions using parentheses?

- What did I learn today about evaluating expressions using parentheses?

- How confident do I feel about evaluating expressions using parentheses on my own? (*Thumbs up, down, or sideways*)



Quick Check - Form A

6th Grade - Readiness Standard 1 - 5.OA.1

Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses.

Directions: Find the value of each number expression. (Work time: 4 minutes)

1.

$$8 \times (3 + 2)$$

2.

$$10 - (2 + 5)$$

3.

$$(9 - 3) \times (2 + 4)$$

4.

$$12 \div (3 - 1)$$

5.

$$9 - (5 - 2)$$

6.

$$(6 + 12) \div (6 - 3)$$



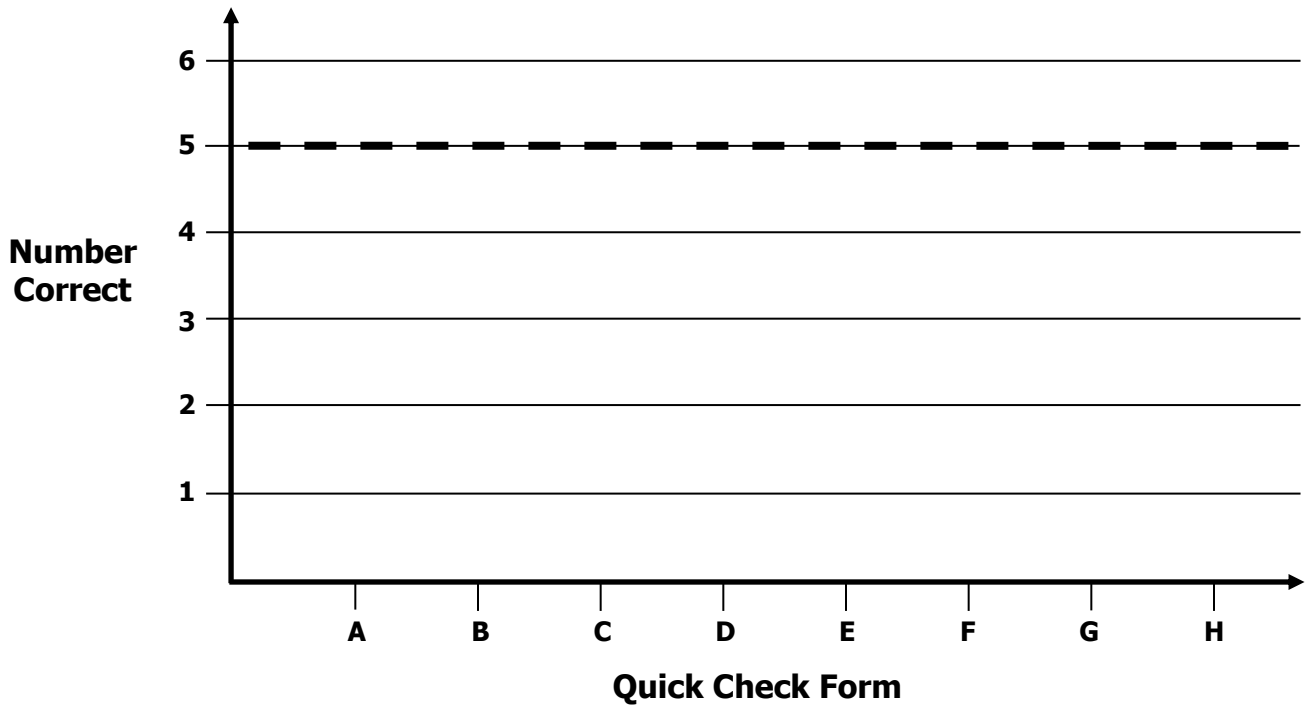
Growth Chart

6th Grade - Readiness Standard 1 - 5.OA.1

Name _____ Date _____

Learning Target: I will evaluate number expressions.

Goal: 5 out of 6 correct



| Intervention | Date | Score |
|--------------|------|-------|
| Session 1: | | |
| Session 2: | | |
| Session 3: | | |
| Session 4: | | |
| Session 5: | | |
| Session 6: | | |
| Session 7: | | |
| Session 8: | | |



Planning Guide: Sessions 2 Through 8

6th Grade - Readiness Standard 1 - 5.OA.1

Learning Target: I will evaluate number expressions using parentheses

Readiness for evaluating algebraic expressions

| Recommended Actions | | | |
|---|---|---|--|
| Beginning (5 min.) | <ul style="list-style-type: none"> ➤ Review the learning target with the whole group and ask each student to set a goal. | | |
| Middle (15 min.) | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Group 1: Students who scored below the learning goal on the previous Quick Check.</p> <ul style="list-style-type: none"> ➤ Model solving a word problem – “I do” ➤ Guided Practice – “We do” <p>Session 2: Evaluate number expressions using the order of operations and base-ten blocks.</p> <p>Session 3: Evaluate number expressions using the order of operations and recording each operation as a single expression.</p> <p>Session 4: Evaluate number expressions using the order of operations and recording each step as a simplified expression.</p> </td> <td style="width: 50%; vertical-align: top;"> <p>Group 2: <i>(Students who met the learning goal)</i></p> <ul style="list-style-type: none"> ➤ Independent practice – “You do alone” <p>Activity 1: <i>“Who’s Value is Greater?”</i></p> <p style="text-align: center;"><i>(Look for additional activities in 5nd grade core instruction resources.)</i></p> </td> </tr> </table> | <p>Group 1: Students who scored below the learning goal on the previous Quick Check.</p> <ul style="list-style-type: none"> ➤ Model solving a word problem – “I do” ➤ Guided Practice – “We do” <p>Session 2: Evaluate number expressions using the order of operations and base-ten blocks.</p> <p>Session 3: Evaluate number expressions using the order of operations and recording each operation as a single expression.</p> <p>Session 4: Evaluate number expressions using the order of operations and recording each step as a simplified expression.</p> | <p>Group 2: <i>(Students who met the learning goal)</i></p> <ul style="list-style-type: none"> ➤ Independent practice – “You do alone” <p>Activity 1: <i>“Who’s Value is Greater?”</i></p> <p style="text-align: center;"><i>(Look for additional activities in 5nd grade core instruction resources.)</i></p> |
| <p>Group 1: Students who scored below the learning goal on the previous Quick Check.</p> <ul style="list-style-type: none"> ➤ Model solving a word problem – “I do” ➤ Guided Practice – “We do” <p>Session 2: Evaluate number expressions using the order of operations and base-ten blocks.</p> <p>Session 3: Evaluate number expressions using the order of operations and recording each operation as a single expression.</p> <p>Session 4: Evaluate number expressions using the order of operations and recording each step as a simplified expression.</p> | <p>Group 2: <i>(Students who met the learning goal)</i></p> <ul style="list-style-type: none"> ➤ Independent practice – “You do alone” <p>Activity 1: <i>“Who’s Value is Greater?”</i></p> <p style="text-align: center;"><i>(Look for additional activities in 5nd grade core instruction resources.)</i></p> | | |
| End (10 min.) | <ul style="list-style-type: none"> ➤ Bring the students back together. ➤ Ask students to reflect on their progress towards the learning target <ul style="list-style-type: none"> ○ What did I learn today about evaluating number expressions? ○ How confident do you feel about evaluating number expressions on my own? (Thumbs up, down, or sideways) ➤ Assess each student’s progress using the next Quick Check form ➤ Guide students to self-correct their Quick Check ➤ Guide students to chart their progress in their Growth Chart <ul style="list-style-type: none"> ○ If not using Delta Math lessons, record the activity in the table ➤ Collect each student’s Quick Check and Growth Chart | | |
| After | <ul style="list-style-type: none"> ➤ Regroup students to differentiate the middle of sessions 3 through 8 <ul style="list-style-type: none"> ○ Promote students who met the learning goal to group 2 ○ Exit students who met the learning goal for a third time ➤ Problem solve with a team to plan additional support for students who did not exit | | |



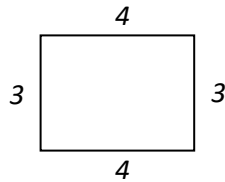
Session 2: Modeling (I Do)

6th Grade - Readiness Standard 1 - 5.OA.1

Learning Target: I will evaluate number expressions using parentheses

Readiness for evaluating algebraic expressions

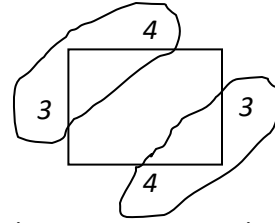
The perimeter can be defined as the distance around an object. Which number expression can be used to calculate the perimeter of the rectangle below? $2 \times 3 + 4$ or $2 \times (3 + 4)$





Session 2: Modeling (I Do - Teacher Notes)

6th Grade - Readiness Standard 1 - 5.OA.1



Learning Target: I will evaluate number expressions using parentheses

Readiness for evaluating algebraic expressions

The perimeter can be defined as the distance around an object. Which number expression can be used to calculate the perimeter of the rectangle below? $2 \times 3 + 4$ or $2 \times (3 + 4)$

I am going to think aloud to model solving this problem. Your job is to watch, listen, think and ask questions.

First, it is important to know what the problem is about.

The problem is about the perimeter of a rectangle.

Second, I need to determine what I need to find.

I need to find which number expression will calculate the perimeter: $2 \times 3 + 4$ or $2 \times (3 + 4)$

Third, I need to determine what I know.

I know that the perimeter is the distance around an object and the length and width of the rectangle is 4 and 3.

Fourth, I need to figure out what I can try.

I am going to try building the perimeter with blocks. Then, I'll use my blocks to model each expression to find out which one it equals.

I will model the rectangle using 3 blocks for each width and 4 blocks for each length.

(Place the blocks to form a rectangle.)



To calculate the perimeter, I will find the total number of blocks...

$3 + 4 + 3 + 4$ equals 14.

Now we can find out which number expression is equal to 14.

(Place both number expression cards below the blocks.)



To evaluate $2 \times 3 + 4$, I need to multiply before I can add... 2×3 ...*(Point to the 2×3 and place 2 groups of 3 blocks.)*

Then add 4 more...*(Point to the $+ 4$ and place 4 blocks)*

6 plus 4 is equal to 10...not 14. *(Point to the group of 6 and then 4)*

Now I will model $2 \times (3 + 4)$.

Since $3 + 4$ is in parentheses, I must find this value first...7 *(Place a group of 3 and a group of 4 in a row.)*

Now I can multiply 2 times the value in the parentheses. *(Place a second row of 7 below the first.)*

2 groups of 7 is equal to 14...which is the perimeter of the original rectangle.

Last, I need to make sure that my answer makes sense.

I found that the number expressions $2 \times (3 + 4)$ is equal to the perimeter of the rectangle. It makes sense because I built the rectangle to find the total. Then, I found the value of each number expression using blocks and following the order of operations.

Before we move on to the guided practice, I'd like to show you the number expression in the drawing...the 3 and 4 each represent a length and a width that added together is 7. Since there are 2 groups of them, we can multiply 2 times 7 to equal the perimeter...14. *(Draw a circle to group each pair of lengths and widths.)*



Modeling & Guided Practice Cards

6th Grade - Readiness Standard 1 - 5.OA.1

| | |
|--|--|
| Use for Modeling Problem $2 \times 3 + 4$ | Use for Modeling Problem $2 \times (3 + 4)$ |
| Use for Problem 1 $10 - 3 - 1$ | Use for Problem 1 $10 - (3 - 1)$ |
| Use for Problem 2 $12 \div 4 - 1$ | Use for Problem 2 $12 \div (4 - 1)$ |
| Use for Problem 3 $4 + 6 \div 3 - 1$ | Use for Problem 3 $(4 + 6) \div (3 - 1)$ |
| Use for Problem 4 $8 - 4 + 2$ | Use for Problem 4 $8 - (4 + 2)$ |
| Use for Problem 5 $4 \times 5 - 2$ | Use for Problem 5 $4 \times (5 - 2)$ |
| Use for Problem 6 $4 + 1 \times 5 - 2$ | Use for Problem 6 $(4 + 1) \times (5 - 2)$ |



Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses 6th Grade - Readiness Standard 1 - 5.OA.1

Session 2: Guided Practice (We Do)

Materials:

- Base-Ten Blocks (20 ones)
- Number Expression Cards (2 sets)
- Order of Operations Poster (Posted on the wall)

We Do Together: (Teacher Actions)

- Find each number expression card and place them side-by-side.
- Use base-ten blocks and the order of operations to evaluate both number expressions.

| | | | |
|----|--------------------|-----|------------------------|
| 1. | $10 - 3 - 1$ | and | $10 - (3 - 1)$ |
| 2. | $12 \div 4 - 1$ | and | $12 \div (4 - 1)$ |
| 3. | $4 + 6 \div 3 - 1$ | and | $(4 + 6) \div (3 - 1)$ |

You Do Together: (As a class, or in small groups)

- Students take turns leading to evaluate each number expression.

| | | | |
|----|----------------------|-----|--------------------------|
| 4. | $8 - 4 + 2$ | and | $8 - (4 + 2)$ |
| 5. | $4 \times 5 - 2$ | and | $4 \times (5 - 2)$ |
| 6. | $4 + 1 \times 5 - 2$ | and | $(4 + 1) \times (5 - 2)$ |

Learning Target: I will evaluate number expressions using parentheses 6th Grade - Readiness Standard 1 - 5.OA.1

Session 2: Guided Practice (We Do – Visual Support)

Materials:

- Base-Ten Blocks (20 ones)
- Number Expression Cards (2 sets)
- Order of Operations Poster (Posted on the wall)

We Do Together: (Teacher Actions)

- Find each number expression card and place them side-by-side.
- Use base-ten blocks to evaluate both number expressions.

| | |
|---|---|
| <p>1.</p> <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-bottom: 10px;">$10 - 3 - 1$</div> <p>Say:</p> <p>$10 - 3 = 7$</p> <p>$7 - 1 = 6$</p> | <p>and</p> <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-bottom: 10px;">$10 - (3 - 1)$</div> <p>Say:</p> <p>$3 - 1 = 2$</p> <p>$10 - 2 = 8$</p> |
| <p>2.</p> <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-bottom: 10px;">$12 \div 4 - 1$</div> <p>Say:</p> <p>$12 \div 4 = 3$</p> <p>$3 - 1 = 2$</p> | <p>and</p> <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-bottom: 10px;">$12 \div (4 - 1)$</div> <p>Say:</p> <p>$4 - 1 = 3$</p> <p>$12 \div 3 = 4$</p> |
| <p>3.</p> <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-bottom: 10px;">$4 + 6 \div 3 - 1$</div> <p>Say:</p> <p>$6 \div 3 = 2$</p> <p>$4 + 2 = 6$</p> <p>$6 - 1 = 5$</p> | <p>and</p> <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-bottom: 10px;">$(4 + 6) \div (3 - 1)$</div> <p>Say:</p> <p>$4 + 6 = 10$</p> <p>$3 - 1 = 2$</p> <p>$10 \div 2 = 5$</p> |



Order of Operations

6th Grade - Readiness Standard 1 - 5.OA.1

Learning Target: I will evaluate number expressions using parentheses

- Do everything in parentheses

- Do all multiplication and division from left to right

- Do all addition and subtraction from left to right



Session 2: Self-Reflection

6th Grade - Readiness Standard 1 - 5.OA.1

Learning Target: I will evaluate number expressions using parentheses

Briefly discuss student responses

- What did I learn today about evaluating expressions using parentheses?

- How confident do I feel about evaluating expressions using parentheses on my own? (*Thumbs up, down, or sideways*)



Quick Check - Form B

6th Grade - Readiness Standard 1 - 5.OA.1

Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses.

Directions: Find the value of each number expression. (Work time: 4 minutes)

1.

$$10 \times (2 + 5)$$

2.

$$12 - (6 + 3)$$

3.

$$(8 - 2) \times (4 + 6)$$

4.

$$24 \div (8 - 5)$$

5.

$$11 - (6 - 4)$$

6.

$$(4 + 10) \div (5 - 3)$$



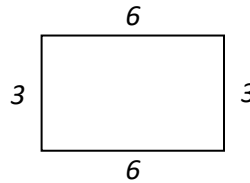
Session 3: Modeling (I Do)

6th Grade - Readiness Standard 1 - 5.OA.1

Learning Target: I will evaluate number expressions using parentheses

Readiness for evaluating algebraic expressions

Find a number expression that uses parentheses to calculate the perimeter of the rectangle below.
Then use the number expression to calculate the perimeter.





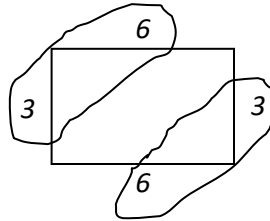
Session 3: Modeling (I Do - Teacher Notes)

6th Grade - Readiness Standard 1 - 5.OA.1

Learning Target: I will evaluate number expressions using parentheses

Readiness for evaluating algebraic expressions

Find a number expression that uses parentheses to calculate the perimeter of the rectangle below. Then use the number expression to calculate the perimeter.



$$2 \times (3 + 6)$$

$$2 \times (9)$$

$$18$$

I am going to think aloud to model solving this problem.

Your job is to watch, listen, think and ask questions.

First, it is important to know what the problem is about.

The problem is about calculating the perimeter of a rectangle.

Second, I need to determine what I need to find.

I need to find a number expression that uses parentheses to calculate the perimeter and then find its value.

Third, I need to determine what I know.

I know that the rectangle has the dimensions of 3 and 6 and it can be viewed as two sets of sides.

Fourth, I need to figure out what I can try.

I am going to try using I learned from our previous problem to write an expression that finds 2 groups of a width and length. (Draw a ring around the two sets of sides)

Now I can record what I see...2 groups of 3 plus 6.

(Write the number expression " $2 \times (3 + 6)$ ")

To evaluate number expressions, I need to follow the order of operations by doing everything inside the parentheses first... $3 + 6$ is equal to 9.

(Write " $2 \times (9)$ " under the original number expression.)

Next, I multiply and divide from left to right...2 times 9 equals 18. (Write "18" under the " $2 \times (9)$ ".)

Last, I need to make sure that my answer makes sense.

I found that the perimeter of the rectangle is 18. It makes sense because I followed the order of operations and found how much one length and width equals, then I multiplied that by 2 to find the total distance around.



Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses 6th Grade - Readiness Standard 1 - 5.OA.1

Session 3: Guided Practice (We Do)

We Do Together: (Teacher Actions)

- Say each number expression.
- Write each step used to evaluate each number expression.

1.

$$10 - 3 - 1 \quad \text{and} \quad 10 - (3 - 1)$$

2.

$$12 \div 4 - 1 \quad \text{and} \quad 12 \div (4 - 1)$$

3.

$$4 + 6 \div 3 - 1 \quad \text{and} \quad (4 + 6) \div (3 - 1)$$

4.

$$5 + 3 \times 7 + 2 \quad \text{and} \quad (5 + 3) \times (7 + 2)$$



Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses 6th Grade - Readiness Standard 1 - 5.OA.1

Session 3: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

- Students take turns leading to evaluate each number expression.

5.

$$8 - 4 + 2 \quad \text{and} \quad 8 - (4 + 2)$$

6.

$$7 \times 5 - 2 \quad \text{and} \quad 7 \times (5 - 2)$$

7.

$$4 + 2 \times 5 - 3 \quad \text{and} \quad (4 + 2) \times (5 - 3)$$

8.

$$8 + 5 - 3 \times 2 \quad \text{and} \quad 8 + (5 - 3) \times 2$$



Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses 6th Grade - Readiness Standard 1 - 5.OA.1

Session 3: Guided Practice (We Do – Visual Support)

We Do Together: (Teacher Actions)

- Say each number expression.
- Write each step used to evaluate each number expression.

1.

$$10 - 3 - 1$$

and

$$10 - (3 - 1)$$

$$7 - 1$$

$$10 - (2)$$

$$6$$

$$8$$

2.

$$12 \div 4 - 1$$

and

$$12 \div (4 - 1)$$

$$3 - 1$$

$$12 \div (3)$$

$$2$$

$$4$$

3.

$$4 + 6 \div 3 - 1$$

and

$$(4 + 6) \div (3 - 1)$$

$$4 + 2 - 1$$

$$(10) \div (2)$$

$$6 - 1$$

$$5$$

$$5$$

4.

$$5 + 3 \times 7 + 2$$

and

$$(5 + 3) \times (7 + 2)$$

$$5 + 21 + 2$$

$$(8) \times (9)$$

$$26 + 2$$

$$72$$

$$28$$



Session 3: Self-Reflection

6th Grade - Readiness Standard 1 - 5.OA.1

Learning Target: I will evaluate number expressions using parentheses

Briefly discuss student responses

- What did I learn today about evaluating expressions using parentheses?

- How confident do I feel about evaluating expressions using parentheses on my own? (*Thumbs up, down, or sideways*)



Quick Check - Form C

6th Grade - Readiness Standard 1 - 5.OA.1

Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses.

Directions: Find the value of each number expression. (Work time: 4 minutes)

1.

$$9 \times (4 + 3)$$

2.

$$11 - (4 + 1)$$

3.

$$(10 - 5) \times (1 + 4)$$

4.

$$18 \div (6 - 3)$$

5.

$$12 - (4 - 3)$$

6.

$$(5 + 16) \div (8 - 1)$$



Session 4: Modeling (I Do)

6th Grade - Readiness Standard 1 - 5.OA.1

Learning Target: I will evaluate number expressions using parentheses

Readiness for evaluating algebraic expressions

A number riddle asks, "I am the number expression $12 - (6 + 3)$...what is my value?" Find the answer and explain the mistake some students make when their answer is 9.

Session 4: Modeling (*I Do - Teacher Notes*)

6th Grade - Readiness Standard 1 - 5.OA.1

Learning Target: I will evaluate number expressions using parentheses

Readiness for evaluating algebraic expressions

A number riddle asks, "I am the number expression $12 - (6 + 3)$...what is my value?" Find the answer and explain the mistake some students make when their answer is 9.

I am going to think aloud to model solving this problem.

Your job is to watch, listen, think and ask questions.

First, it is important to know what the problem is about.

The problem is about a number riddle.

Second, I need to determine what I need to find.

I need to find if the value of the riddle and why it is not equal to 9.

Third, I need to determine what I know.

I know that the number expression is $12 - (6 + 3)$ and the order of operations says to do inside parentheses first, then multiply and divide from left to right, then add and subtract from left to right.

(Write "Order of Operations", "Parentheses", "Multiply and Divide", "Add and Subtract".)

Fourth, I need to figure out what I can try.

I am going to try using the order of operations to help me find the value and then look for a mistake that could make a student answer 9.

First, I need to find the value inside the parentheses.

(Write " $12 - ()$ " below the number expression.)

$$12 - (6 + 3)$$

Since $6 + 3$ is inside the parentheses, the value inside is equal to 9.

(Write "9" inside the empty parentheses.)

$$12 - (9)$$

$$3$$

Now, I can subtract 9 from 12.

(Point to the line, $12 - 9$.)

I like to use addition to help me subtract by thinking...9 plus what number equals 12?...3

(Write "3" below " $12 - (9)$ ")

The value of the number expression is 3.

Now, I want to look for a common error that a student could do to get a value of 9...if a student forgets and does the math from left to right forgetting about the parentheses...they would compute $12 - 6 = 6$...then add 3 to get 9.

Last, I need to make sure that my answer makes sense.

I found that the value of the number expression is 3 and the mistake a student might make to get 9 would be forgetting about the parentheses. It makes sense because I followed the order of operations to find the value of 3...and when I didn't do the parentheses first my wrong answer ended up being 9.



Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses 6th Grade - Readiness Standard 1 - 5.OA.1

Session 4: Guided Practice (We Do)

We Do Together: (Teacher Actions)

- Say each number expression.
- Use the order of operations to evaluate each number expression and record your work below.

1.

$$12 - 4 - 1 \quad \text{and} \quad 12 - (4 - 1)$$

2.

$$20 \div 5 - 1 \quad \text{and} \quad 20 \div (5 - 1)$$

3.

$$2 + 6 \div 3 - 1 \quad \text{and} \quad (2 + 6) \div (3 - 1)$$

4.

$$5 + 2 \times 7 + 3 \quad \text{and} \quad (5 + 2) \times (7 + 3)$$



Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses 6th Grade - Readiness Standard 1 - 5.OA.1

Session 4: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

- Students take turns leading to evaluate each number expression.

5.

$$9 - 4 + 3 \quad \text{and} \quad 9 - (4 + 3)$$

6.

$$6 \times 9 - 2 \quad \text{and} \quad 6 \times (9 - 2)$$

7.

$$8 + 2 \times 5 - 2 \quad \text{and} \quad (8 + 2) \times (5 - 2)$$

8.

$$9 + 4 - 2 \times 3 \quad \text{and} \quad 9 + (4 - 2) \times 3$$



Quick Check - Form D

6th Grade - Readiness Standard 1 - 5.OA.1

Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses.

Directions: Find the value of each number expression. (Work time: 4 minutes)

1.

$$7 \times (6 + 4)$$

2.

$$14 - (7 + 2)$$

3.

$$(12 - 4) \times (2 + 5)$$

4.

$$20 \div (4 - 2)$$

5.

$$10 - (7 - 3)$$

6.

$$(8 + 8) \div (8 - 4)$$



Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses 6th Grade - Readiness Standard 1 - 5.OA.1

Session 5: Guided Practice (We Do)

We Do Together: (Teacher Actions)

- Say each number expression.
- Write each step used to evaluate each number expression.

1.

$$10 - 3 + 1 \quad \text{and} \quad 10 - (3 + 1)$$

2.

$$15 \div 5 - 2 \quad \text{and} \quad 15 \div (5 - 2)$$

3.

$$4 + 6 \div 2 - 1 \quad \text{and} \quad (4 + 6) \div (2 - 1)$$

4.

$$5 + 3 \times 4 + 2 \quad \text{and} \quad (5 + 3) \times (4 + 2)$$



Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses 6th Grade - Readiness Standard 1 - 5.OA.1

Session 5: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

- Students take turns leading to evaluate each number expression.

5.

$$8 - 6 + 2 \quad \text{and} \quad 8 - (6 + 2)$$

6.

$$7 \times 6 - 2 \quad \text{and} \quad 7 \times (6 - 2)$$

7.

$$4 + 2 \times 9 - 3 \quad \text{and} \quad (4 + 2) \times (9 - 3)$$

8.

$$9 + 5 - 3 \times 2 \quad \text{and} \quad (9 + 5) - (3 \times 2)$$



Session 5: Self-Reflection

6th Grade - Readiness Standard 1 - 5.OA.1

Learning Target: I will evaluate number expressions using parentheses

Briefly discuss student responses

- What did I learn today about evaluating expressions using parentheses?

- How confident do I feel about evaluating expressions using parentheses on my own? (*Thumbs up, down, or sideways*)



Quick Check - Form E

6th Grade - Readiness Standard 1 - 5.OA.1

Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses.

Directions: Find the value of each number expression. (Work time: 4 minutes)

| | |
|---------------------------------------|--------------------------------------|
| 1. $8 \times (3 + 2)$ | 2. $10 - (2 + 5)$ |
| 3. $(9 - 3) \times (2 + 4)$ | 4. $12 \div (3 - 1)$ |
| 5. $9 - (5 - 2)$ | 6. $(6 + 12) \div (6 - 3)$ |



Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses 6th Grade - Readiness Standard 1 - 5.OA.1

Session 6: Guided Practice (We Do)

We Do Together: (Teacher Actions)

- Say each number expression.
- Write each step used to evaluate each number expression.

1.

$$15 - 5 - 1 \quad \text{and} \quad 15 - (5 - 1)$$

2.

$$24 \div 4 - 1 \quad \text{and} \quad 24 \div (4 - 1)$$

3.

$$8 + 12 \div 3 - 1 \quad \text{and} \quad (8 + 12) \div (3 - 1)$$

4.

$$5 + 3 \times 8 + 2 \quad \text{and} \quad (5 + 3) \times (8 + 2)$$



Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses 6th Grade - Readiness Standard 1 - 5.OA.1

Session 6: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

- Students take turns leading to evaluate each number expression.

5.

$$10 - 4 + 2 \quad \text{and} \quad 10 - (4 + 2)$$

6.

$$9 \times 5 - 2 \quad \text{and} \quad 9 \times (5 - 2)$$

7.

$$6 + 2 \times 5 - 3 \quad \text{and} \quad (6 + 2) \times (5 - 3)$$

8.

$$12 + 6 - 3 \times 2 \quad \text{and} \quad (12 + 6) - (3 \times 2)$$



Session 6: Self-Reflection

6th Grade - Readiness Standard 1 - 5.OA.1

Learning Target: I will evaluate number expressions using parentheses

Briefly discuss student responses

- What did I learn today about evaluating expressions using parentheses?

- How confident do I feel about evaluating expressions using parentheses on my own? (*Thumbs up, down, or sideways*)



Quick Check - Form F

6th Grade - Readiness Standard 1 - 5.OA.1

Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses.

Directions: Find the value of each number expression. (Work time: 4 minutes)

1.

$$10 \times (2 + 5)$$

2.

$$12 - (6 + 3)$$

3.

$$(8 - 2) \times (4 + 6)$$

4.

$$24 \div (8 - 5)$$

5.

$$11 - (6 - 4)$$

6.

$$(4 + 10) \div (5 - 3)$$



Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses 6th Grade - Readiness Standard 1 - 5.OA.1

Session 7: Guided Practice (We Do)

We Do Together: (Teacher Actions)

- Say each number expression.
- Use the order of operations to evaluate each number expression and record your work below.

1.

$$12 - 6 - 2 \quad \text{and} \quad 12 - (6 - 2)$$

2.

$$28 \div 7 - 3 \quad \text{and} \quad 28 \div (7 - 3)$$

3.

$$4 + 12 \div 4 - 2 \quad \text{and} \quad (4 + 12) \div (4 - 2)$$

4.

$$6 + 2 \times 7 + 3 \quad \text{and} \quad (6 + 2) \times 7 + 3$$



Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses 6th Grade - Readiness Standard 1 - 5.OA.1

Session 7: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

- Students take turns leading to evaluate each number expression.

5.

$$15 - 4 + 5 \quad \text{and} \quad 15 - (4 + 5)$$

6.

$$8 \times 9 - 2 \quad \text{and} \quad 8 \times (9 - 2)$$

7.

$$7 + 2 \times 8 - 2 \quad \text{and} \quad (7 + 2) \times (8 - 2)$$

8.

$$9 - 4 + 2 \times 5 \quad \text{and} \quad 9 - (4 + 2) \times 5$$



Session 7: Self-Reflection

6th Grade - Readiness Standard 1 - 5.OA.1

Learning Target: I will evaluate number expressions using parentheses

Briefly discuss student responses

- What did I learn today about evaluating expressions using parentheses?

- How confident do I feel about evaluating expressions using parentheses on my own? (*Thumbs up, down, or sideways*)



Quick Check - Form G

6th Grade - Readiness Standard 1 - 5.OA.1

Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses.

Directions: Find the value of each number expression. (Work time: 4 minutes)

1.

$$9 \times (4 + 3)$$

2.

$$11 - (4 + 1)$$

3.

$$(10 - 5) \times (1 + 4)$$

4.

$$18 \div (6 - 3)$$

5.

$$12 - (4 - 3)$$

6.

$$(5 + 16) \div (8 - 1)$$



Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses 6th Grade - Readiness Standard 1 - 5.OA.1

Session 8: Guided Practice (We Do)

We Do Together: (Teacher Actions)

- Say each number expression.
- Use the order of operations to evaluate each number expression and record your work below.

1.

$$20 - 10 - 2 \quad \text{and} \quad 20 - (10 - 2)$$

2.

$$24 \div 6 - 2 \quad \text{and} \quad 24 \div (6 - 2)$$

3.

$$4 + 6 \div 2 - 1 \quad \text{and} \quad (4 + 6) \div (2 - 1)$$

4.

$$3 + 6 \times 7 + 2 \quad \text{and} \quad (3 + 6) \times (7 + 2)$$



Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses 6th Grade - Readiness Standard 1 - 5.OA.1

Session 8: Guided Practice (We Do - Continued)

You Do Together: (As a class, or in small groups)

- Students take turns leading to evaluate each number expression.

5.

$$10 - 4 + 2 \quad \text{and} \quad 10 - (4 + 2)$$

6.

$$7 \times 10 - 2 \quad \text{and} \quad 7 \times (10 - 2)$$

7.

$$8 + 2 \times 5 - 2 \quad \text{and} \quad 8 + 2 \times (5 - 2)$$

8.

$$12 + 4 - 2 \times 3 \quad \text{and} \quad 12 + (4 - 2) \times 3$$



Quick Check - Form H

6th Grade - Readiness Standard 1 - 5.OA.1

Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses.

Directions: Find the value of each number expression. (Work time: 4 minutes)

1.

$$7 \times (6 + 4)$$

2.

$$14 - (7 + 2)$$

3.

$$(12 - 4) \times (2 + 5)$$

4.

$$20 \div (4 - 2)$$

5.

$$10 - (7 - 3)$$

6.

$$(8 + 8) \div (8 - 4)$$



Independent Practice

6th Grade - Readiness Standard 1 - 5.OA.1

Learning Target: I will evaluate number expressions using parentheses

Title of Game: Who's Value is Greater?

Number of Players: 2

Objective: To draw the number expression with the greatest value.

Materials: 1 set of Problem cards and 1 recording sheet per player.

Directions:

- Shuffle the Problem cards and place them in the pile face down.
- Each player flips over a Problem card and records their expression on the recording sheet.
- Each player evaluates their number expression and how they evaluated it.

"First, I ..."

"Then, I ..."

"The value of my number expression is ____."

- The player with the greatest value circles their expression on their recording sheet.
- Begin the next round by each player flipping over the next card from their pile.
- The winner of the game is the player with the most problems circled.

Player 1

Player 2



Name _____ Date _____

Learning Target: I will evaluate number expressions using parentheses

Independent Practice: Who's Value is Greater? (Recording Sheet)

| | |
|---------|---------|
| Round 1 | Round 2 |
| Round 3 | Round 4 |
| Round 5 | Round 6 |
| Round 7 | Round 8 |



Number Expression Cards (Set A)

6th Grade - Readiness Standard 1 - 5.OA.1

$$12 - 6 - 1$$

Set A

$$12 - (6 - 1)$$

Set A

$$12 \div 6 - 2$$

Set A

$$12 \div (6 - 2)$$

Set A

$$10 - 6 + 1$$

Set A

$$10 - (6 + 1)$$

Set A

$$4 + 2 \times 5 - 3$$

Set A

$$(4 + 2) \times (5 - 3)$$

Set A

$$6 + 8 \div 4 - 2$$

Set A

$$(6 + 8) \div (4 - 2)$$

Set A



Number Expression Cards (Set B)

6th Grade - Readiness Standard 1 - 5.OA.1

$$15 - 4 - 1$$

Set B

$$15 - (4 - 1)$$

Set B

$$15 \div 5 - 2$$

Set B

$$15 \div (5 - 2)$$

Set B

$$15 - 5 + 3$$

Set B

$$15 - (5 + 3)$$

Set B

$$5 + 1 \times 7 - 2$$

Set B

$$(5 + 1) \times (7 - 2)$$

Set B

$$7 + 9 \div 3 - 1$$

Set B

$$(7 + 9) \div (3 - 1)$$

Set B



Number Expression Cards (Set C)

6th Grade - Readiness Standard 1 - 5.OA.1

$$18 - 8 - 1$$

Set C

$$18 - (8 - 1)$$

Set C

$$18 \div 6 - 3$$

Set C

$$18 \div (6 - 3)$$

Set C

$$18 - 8 + 2$$

Set C

$$18 - (8 + 2)$$

Set C

$$6 + 2 \times 8 - 1$$

Set C

$$(6 + 2) \times (8 - 1)$$

Set C

$$7 + 8 \div 4 - 1$$

Set C

$$(7 + 8) \div (4 - 1)$$

Set C



Questions for Solving Word Problems

Q_1

What is the problem about?

Q_2

What do I need to find?

Q_3

What do I know?

Q_4

What can I try?

Q_5

Does my answer make sense?



Steps for Solving Word Problems

Q₁. *What is the problem about?*

Q₂. *What do I need to find?*

Q₃. *What do I know?*

Q₄. *What can I try?*

Q₅. *Does my answer make sense?*