

SIMPLIFYING EXPRESSIONS

Name: _____ Score: _____

SIMPLIFYING EXPRESSION

assessment

Directions: Show your work whenever possible. Use a separate sheet of paper if needed.

1) Write an expression or equation for "four less than triple a number squared is nineteen."

2) Write an expression or equation for "the product of a number and ten."

3) Write an expression or equation for "two more than triple a number."

4) Write an expression or equation for "miles a week for x weeks and ran a miles."

5) Write and simplify an expression to represent the perimeter of square if one side is $2x + 2$ units long.

6) Yasmin had \$1,500 in the bank. She made equal withdrawals of \$ x and now has \$ y left. Write an expression or equation for this situation.

7) Write an equivalent expression using the commutative property.
 $13 + (4 + 2) =$ _____

8) Write an expression equivalent to $6(4 + 3)$.

9) Write an equivalent expression using the associative property.
 $(8 + 9) + 5 =$ _____

10) Identify the property: $6(4 + 3) = 6 \cdot 7$

Name: _____ Date: _____ Class: _____ *coloring page*

THE DISTRIBUTIVE PROPERTY

Directions: Use the distributive property and combining like terms to simplify each expression. Find your answer in one of the two answer boxes. Find the problem number on the coloring page and color each section with the number the color that corresponds to your answer.

#		Answer 1	Answer 2
1	$3(x - 2) + 5$	$3x - 1$ Black	$3x + 5$ Pink
2	$5(3 - x)$	$15 - x$ Brown	$15 - 5x$ Pink
3	$x + 2(x + 8)$	$3x + 16$ Orange	$2x + 16$ Green
4	$5x - 3(x - 4)$	$2x + 12$ Brown	$8x + 12$ Black
5	$10(-x - 9) - x$	$9x - 90$ Blue	$-11x - 90$ Green
6	$-3(x - 5) - 4$	$-3x + 11$ Yellow	$-3x - 19$ Orange
7	$x - 1(x + 3)$	-3 Purple	$-2x - 3$ Blue
8	$(x - 2)10$	$x - 20$ Green	

BEYOND THE WORKSHEET

Help students build a strong algebra foundation with this comprehensive **Simplifying Expressions Unit**. Students begin by reviewing order of operations before simplifying algebraic expressions using the distributive property, combining like terms, evaluating expressions, and writing algebraic expressions and equations from real-world situations.

learn more!

WARM-UPS & EXIT TICKETS

- Structured and spiraled daily warm-up exercises and exercises keep students engaged and focused.

Name: _____

Date: _____

exit ticket

Lesson 1: Simplifying Expressions

Skill: Order of Operations Review

1. $8 - 15 \cdot (-10) - -6 $	2. $4 + 18 - (3 - 2 \cdot (-14))$
3. $(-2 + 3 - (-15))(6 \cdot 2) \div 3$	4. $((23 - 12)3) \div (-11 - 8)$

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Name: _____

Date: _____

exit ticket

Lesson 3: Writing Expressions & Equations

Skill: Writing Expressions and Equations

1. Write the expression or equation: "A number less than twice twelve is four."	2. Write the expression or equation: "The difference of a number and six squared."
3. Write the expression or equation: "The sum of triple a number and seven."	4. Write the expression or equation: "8 increased by the quotient of a number and three is thirty-two."

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Name: _____

Date: _____

exit ticket

Lesson 3: Writing Expressions & Equations

Skill: Writing Expressions

1. Write an expression that represents "four more than half a number."	2. Write an expression that represents "half the sum of twice a number and four."
3. Ben bought 6 pairs of jeans for \$ x each and a shirt for \$15. Write an expression that represents how much she paid altogether.	4. Millie has four less than half as many books as Ben (b). Write an expression that represents how many books Millie has.

STUDENT FRIENDLY NOTES

- This unit is a full review unit of key skills necessary for success in Algebra 2.
- The notes provide students with a place to review key concepts and ideas as well as guided practice.

Name: _____ Date: _____

EVALUATING EXPRESSIONS NO

Key Ideas:

- There is a difference between simplifying an expression and evaluating an expression
 - Simplifying: _____
 - Evaluating: _____

Try it:

For #1 – 2: Simplify the following expressions:

1) $-9(3x - 4) + 2x - 10$

2) $4x - 2(6 - x) + 4$

For #3 – 8: Evaluate the following expressions:

3) Evaluate $8x + 2(x - 6)$ if $x = -5$.

4) Evaluate $4x - 3(2x - y)$ if $x = \frac{1}{2}$ and $y = 4$.

5) Evaluate $9(4x - 15)$ if $x = 3$.

6) Evaluate if $8y + 4x - (2x + 3)$ $x = -2$ and $y = 6$.

7) Find the value of 2.

PRACTICE WORKSHEETS

- Each skill includes a worksheet for independent practice and skill reinforcement.

Name: _____ Date: _____

ORDER OF OPERATIONS PRACTICE

Directions: Simplify each expression using the order of operations.

1) $-5 + 8 \div 2 - 7$	2) $4 + 2(-20 - 2 \cdot 4)$
3) $2 \cdot 7 + 24 \div 2$	4) $(-8 + 50 - 4) - (6 + 2)^2$
5) $30 \div (8 - 7) \cdot 2 $	6) $3 \cdot [-5 \cdot (9 + 5) - (-4)]$
7) $2^2 \div 2 + 8 \cdot -2 $	8) $(3 + 2)^2 - 4 + 3$
9) $-9 \cdot (2^2 + 4 \cdot 5)$	10) $8 \div (4^2 - 8) + 3^2$

Name: _____ Date: _____

WRITING EXPRESSIONS & EQUATIONS PRACTICE

Directions: Write an expression or equation to represent each situation.

1. At Friday's basketball game, there were 30 more than half the number of fans at Saturday's game. There were x fans at Saturday's game. Write an expression to represent the number of fans at Friday's game.	2. During a sale, a video game is less than three-fifths of the original price of the cell phone. Write an expression to represent the sale price of the cell phone if p is the original price of the cell phone.
3. Lynsi made \$7.00 less than Melissa did at work on Tuesday. Melissa makes \$15.20 per hour and she worked x hours, write an equation that can be solved for x if Lynsi made a total of \$114.60.	4. Write an equation to represent "the triple a number and fifteen is fifty."
5. Ms. Johnson is ordering books for her students. Each book costs \$11.75 and there is a \$5.50 shipping fee. Write an equation that can be used to find out how many books she ordered if her total was \$181.75.	6. Downloading music costs \$0.99 per song plus a registration fee of \$25. Write an expression to represent the total cost to download x songs.

ACTIVITIES AND ASSESSMENTS

- Each lesson includes an activity.
- Pre and Post-Assessments are included.

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Score: _____

SIMPLIFYING EXPRESSIONS

assessment

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Use a separate sheet of paper if needed.

1) Write an expression or equation for "four less than triple a number squared is nineteen."	2) Write an expression or equation for "six plus the product of a number and ten."
3) Write an expression or equation for "two more than triple a number."	4) Write an expression or equation for "you ran 8 miles a week for x weeks and ran a total of 72 miles."
5) Write and simplify an expression to represent the perimeter of square if one side is $2x + 2$ units long.	6) Yasmin had \$1,500 in the bank. She made 22 equal withdrawals of \$ x and now has \$500. Write an expression or equation to represent this situation.
7) Write an equivalent expression using the commutative property.	8) Write an expression equivalent to $2x + 8$.

Name: _____

Date: _____

Class: _____

coloring page

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$-3(x - 5) - 4$	$-3x + 11$ Yellow	$-3x - 19$ Orange
$x - 1(x + 3)$	-3 Purple	$-2x - 3$ Blue
$(x - 2)10$	$x - 20$ Green	$10x - 20$ Red
$+ x)5$		

EVERYTHING INCLUDED:

- Lessons are designed for 30-45 minute on-level classes and may need to be adjusted for longer classes or varied levels.
- Also included is a pacing guide and tracking sheets to record student progress.

UNIT 2

ALGEBRA 1

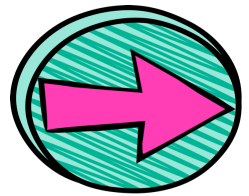
curriculum
BEYOND THE WORKSHEET

Simplifying Expressions		
Lesson	Resources	
Unit Prep (pgs. 3 – 9)	• Weekly Warm Up Sheet • Exit Tickets	• Lesson Plan Template • Unit Pre Assessment
(1) Simplifying Expressions (pgs. 10 – 23)	• 3 Warm Ups • Absolute Value Notes • Absolute Value Practice Worksheet • Properties of Operations Notes • Properties of Operations Practice Worksheet • Distributive Property Notes	• Distributive Property Practice Worksheet • Distributive Property Coloring Worksheet • Order of Operations Practice Worksheet • Distributive Property Puzzle with Integers • Distributive Property Stations • 3 Exit Tickets
(2) Evaluating Expressions Review (pgs. 24 – 30)	• Two Warm Ups • Evaluating Expressions Notes • Evaluating Expressions Practice Worksheets	• Evaluating Expressions Error Analysis • Evaluating Expressions Spin/Roll to Solve Game • Two Exit Tickets
(3) Writing Expressions and Equations (pgs. 31 – 47)	• Three Warm Ups • Writing Expressions & Equations Graphic Organizer • Writing Expressions & Equations Notes • Writing Expressions & Equations Practice Worksheets	• Equivalent Expressions Practice Worksheet • Writing Algebraic Expressions Matching Activity • Expressions Quiz • Three Exit Tickets
End of Unit (pgs. 48 – 51)	• Study Guide • Unit Exam	

Have questions?



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