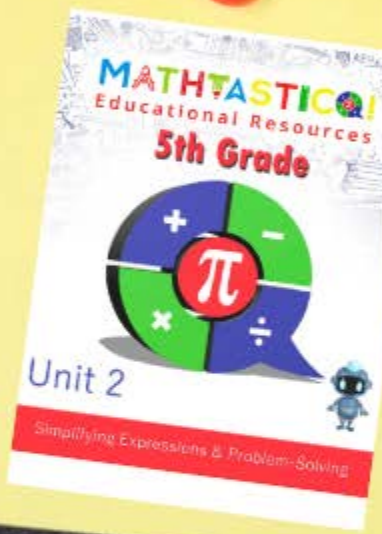
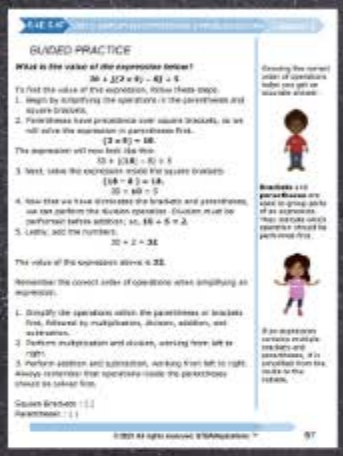
MATH BUNDLE!

5th Grade Unit 2

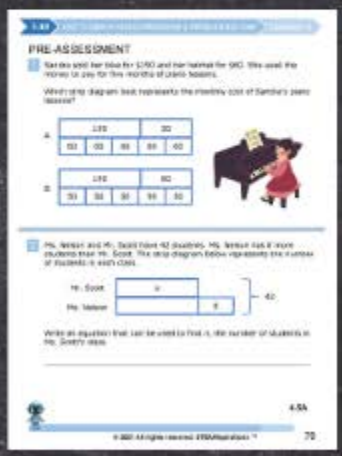










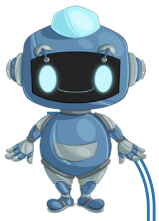


- Games
- Pre-Assessments
- Guided Practice
- Homework Lessons
- Independent Practice
- Checkpoints
- Assessment
- Spiral Review

MATHTASTICO!
Educational Resources

UNIT 2
SIMPLIFYING EXPRESSIONS & PROBLEM-SOLVING

5th GRADE



OBJECTIVE/GOAL

Learn to **identify** prime and composite numbers, **simplify numerical expressions** without exponents, including up to two levels of grouping, and **represent and solve** multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity.

TARGET STANDARD

5.4A Can you identify prime and composite numbers?
5.4E Can you describe the meaning of parentheses and brackets in a numeric expression?
5.4F Can you simplify numerical expressions that do not involve exponents, including up to two levels of grouping?
5.4B Can you represent and solve multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity?

VOCABULARY

- Bracket
- Composite number
- Order of operations
- Parentheses
- Prime number
- Improper Fraction
- Mixed Number
- Variable

QUESTIONS TO GUIDE YOUR THINKING

- What is the difference between prime and composite numbers?
- What is the function of parentheses in an equation?
- How important is it to understand the correct order of operations when solving mathematical problems?

TRACK YOUR ACCOMPLISHMENTS



CHECKPOINT 1 ☐



CHECKPOINT 2 ☐



CHECKPOINT 3 ☐



UNIT ASSESSMENT ☐

SAMPLE

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MONDAY	1. Find the sum. 23,907 + 63,710	2. In a school, there are 539 boys and 721 girls. How many more girls are there than boys? _____	3. A local band sold 492 tickets on the first day of their concert and 680 tickets on the second day. How many tickets did they sell altogether? _____
TUESDAY	4. Find the product. 7,643 x 53	5. Find the product. 8,305 x 19	6. A dealership sold used cars for $5,269 each. If they sold 78 cars, how much money did they earn? _____
WEDNESDAY	7. Find the quotient. $12\overline{)7,632}$	8. Find the quotient. $40\overline{)3,420}$	9. Arthur harvested 2,842 apples. He divided these apples equally into 58 baskets. How many apples were there in each baskets? _____
THURSDAY	10. Estimate the sum by rounding the numbers to the nearest **hundred**. 1,876 + 6,719 = ? _____	11. Estimate the sum by rounding the numbers to the nearest **ten**. 753 + 139 = ? _____	12. Sarah has 238 marbles. She divided the marbles equally among her five friends. How many marbles did each person receive? _____

SAMPLE

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GUIDED PRACTICE

The table below shows the points scored by three players in a basketball game.

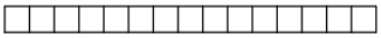
Name	Score
Cindy	15
Patrick	11
Ashley	12

Identify the Prime Numbers and Composite Numbers.

Let us use arrays to define prime and composite numbers. The number 15 can be represented by the arrays below.



3 x 5

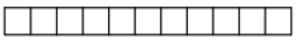


1 x 15

Two types of arrays can be formed for this number: 3 by 5 and 1 by 15.

The number 15 is a **composite** number because it has at least three factors (1, 3, 5, and 15).

Now, let us represent the number 11 using an array.

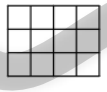


1 x 11

Only one type of array can be formed for this number: 1 by 11.

The number 11 is a **prime** number because it has only two factors: 1 and 11.

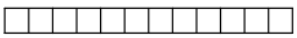
Lastly, let us represent the number 12 using arrays.



3 x 4



2 x 6



1 x 12

The number 12 is a **composite** number because it has more than two factors (1, 2, 3, 4, 6, and 12). Three types of array can be formed with this number: 3 x 4, 2 x 6, and 1 x 12.

Patrick's score is a prime number, while Cindy's and Ashley's scores are composite numbers.

Prime numbers have exactly two factors: one and itself.



Composite numbers have at least three factors.



SAMPLE

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Five-tastic!

This game is for two players. Each player will need a set of colored game pieces. The first player to arrange 5 game pieces in a row (vertically, horizontally, or diagonally) on the gameboard is the winner.

Follow these instructions to play the game:

1. Play rock, paper, scissors. The winner will get the first turn.
2. On your turn, roll the die. If you roll an odd number, find a prime number on the game board and place your game piece on that tile.
3. If you roll an even number, find a composite number on the game board and place your game piece on that tile.
4. If you selected an incorrect tile, your turn is skipped.
5. The next player will do the same.
6. The game continues until one of the players arranges 5 game pieces in a row.



SAMPLE

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SKILL BUILDING

1 Two students wrote an equation. Solve their equations.

Celine wrote:

$743 - [(54 + 12) \times 8] =$ _____



Lloyd wrote:



$743 - 54 + 12 \times 8 =$ _____

2 Do the two equations have the same answer?

_____

3 What do the parentheses in Celine's equation indicate?

_____

_____

_____



SAMPLE

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SKILL BUILDING

4 Mr. Taft guided his students to simplify a numerical expression.

$$14 + [72 - (4 \times 2)]$$

The steps are shown.

Step 1: Multiply
Step 2: Subtract
Step 3: Add

Simplify the numerical expression above.

_____

_____

_____

5 Nicole is simplifying the expression below.

$$10[(23 + 4) \div 3)$$

The steps she performed are shown below.

Step 1: $23 + 4 = 27$
Step 2: $27 \div 3 = 9$

What is the next step?

_____

SAMPLE



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PRE-ASSESSMENT

1 Sandra sold her bike for $190 and her helmet for $60. She used the money to pay for five months of piano lessons.

Which strip diagram best represents the monthly cost of Sandra's piano lessons?

A.

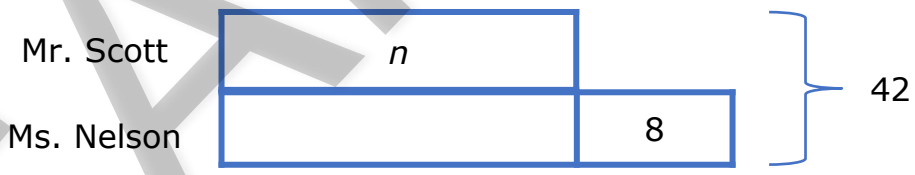
190			50	
60	60	60	60	60

B.

190			60	
50	50	50	50	50



2 Ms. Nelson and Mr. Scott have 42 students. Ms. Nelson has 8 more students than Mr. Scott. The strip diagram below represents the number of students in each class.



Write an equation that can be used to find n, the number of students in Ms. Scott's class.

_____

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SAMPLE

SKILL BUILDING

1 Marlon earned $326 by selling baked goods.

- He sold 18 brownies for $7.
- He sold 10 strawberry cheesecakes.
- Each cheesecake was sold for the same price.

The equation below can be used to find *s*, the cost of each cheesecake.

$$s = [326 - (18 \times 7)] \div 10$$

What is the cost of each cheesecake?



2 Raoul did 145 push-ups in three days. He did 50 push-ups on each of the first two days. The equation below can be used to calculate *x*, the number of push-ups completed by Raoul on the third day.

$$x = 145 - (50 \times 2)$$

How many push-ups were done by Raoul on the third day?



SAMPLE

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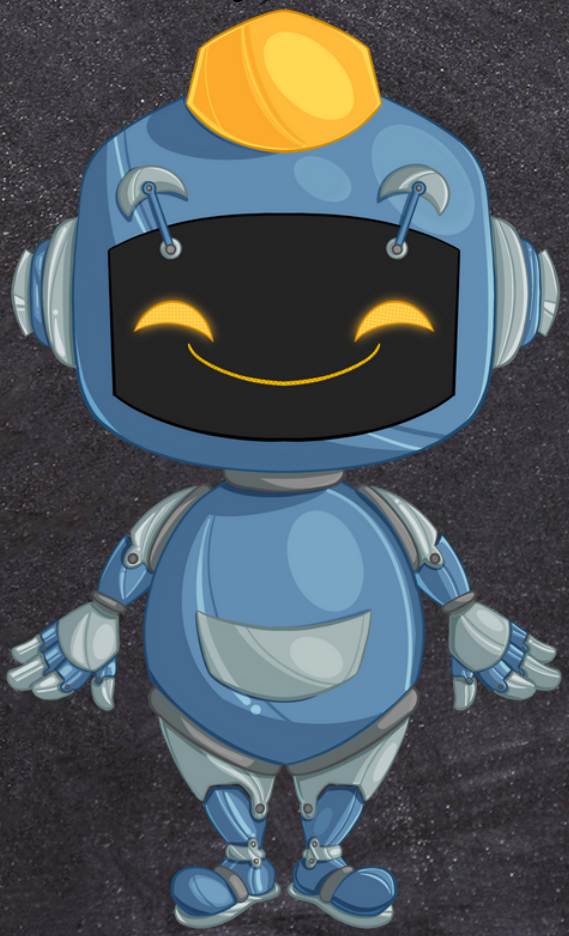

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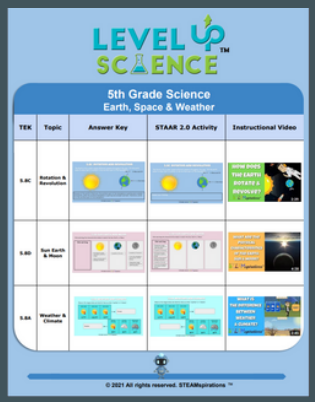

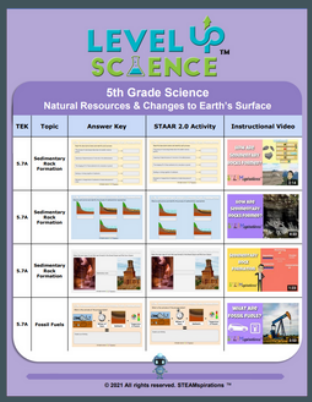



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