

Name: _____ Date: _____ #: _____

Unit 1: Order of Operations and Whole Numbers
Grade 5

Dear Parents or Guardians,

We are off to an exciting year in Math! Our first unit was titled Order of Operations and Whole Numbers. In this unit, students learned to recognize and understand number patterns and rules. They also solved expressions and used inverse operations. This work can be challenging to students, but they have done exceptionally well!

Students should be able to:

- Write and interpret expressions
- Understand place value system
- Multiply and divide multi-digit whole numbers using different strategies

It is important that your child knows how to apply the standards in daily situations. Below is a chart that will help your child master this unit.

Standard	Examples
Solve using the order of operations	$(12 \times 3) + 4 - 1 =$ $36 + 4 - 1 =$ $40 - 1 =$ 39
Write numerical and written expressions	-The quotient of 10 and 5 multiplied by the product of 6 and 2 = $(10 \div 5) \times (6 \times 2)$ $2 \times 12 = 24$ -(6 + 4) x (8 - 1) = The sum of 6 and 4 multiplied by the difference of 8 and 1
Recognize place value	33 The 3 in the tens place is 10 times the value of the 3 in the ones place. The 3 in the ones place is $\frac{1}{10}$ the value of the 3 in the tens place.
Powers of 10	-Powers of 10: 10^2 which is $10 \times 10 = 100$, and 10^3 which is $10 \times 10 \times 10 = 1,000$. $-2.5 \times 10^3 = 2.5 \times (10 \times 10 \times 10) = 2.5 \times 1,000 = 2,500$ $-350 \div 10 = 35 \quad 350/10 = 35 \quad (350 \times 1/10) = 35$

Standards and Sample Problems:

5.OA.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.

5.OA.1 Sample Problem:

1. Create another expression using parenthesis, brackets, and at least 3 operations and 4 terms with a solution (answer) that is equivalent to the expression below.

$$[(10 - 4) + 2] \times 8 - 2$$

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5.OA.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.

5.OA.2 Sample Problem:

2. Interpret the verbal expressions into a numerical expression.

Multiply 8 by 4, then divide by 2 and add 7.

5.NBT.1. Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left.

5.NBT.1 Sample Problem:

3. Is the following statement true?

$$3.41 = 3.410 = 30.014$$

Why or why not?

5.NBT.2 - Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.

5.NBT.2 Sample Problem:

4. Are the following expressions equivalent?

A. 8.2×10^5
B. 82×10^4

Why or why not?

5.NBT.5 - Fluently multiply multi-digit whole numbers using the standard algorithm (or other strategies demonstrating understanding of multiplication) up to a 3 digit by 2 digit factor.

5.NBT.5 Sample Problems:

5.
$$\begin{array}{r} 894 \\ \times 24 \\ \hline \end{array}$$

6.
$$\begin{array}{r} 467 \\ \times 85 \\ \hline \end{array}$$

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5.NBT.6 - Fluently divide up to 4-digit dividends and 2-digit divisors by using at least one of the following methods: strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations or concrete models. (e.g., rectangular arrays, area models)

5.NBT.6 Sample Problems:

7. $4280 \div 10$

8. $5055 \div 15$

How can I study?

Students: Please remember, cramming the night before an assessment is not the best way to study! Reviewing the material nightly helps you tremendously. Most importantly, you will be less stressed, and will feel confident on assessment day!

- Review interactive notebooks
- Have your parents create a practice test
- Teach the material to your parents/siblings/friends/pets!
- Review your quizzes
- Create an informational poster or PowerPoint
- Create a practice test or quiz for a friend, and check their work!
- Re-watch Study Jams and Brain Pops we viewed during the unit
- Go back and practice the IXL skills that were done for homework, and try to earn a higher score!
- Check our any of the posted resources on the **Weebly** (www.fourthgradenpes.weebly.com)
- Create flashcards to carry around with you so you can study when you are not at home

In our math class students spend time discussing and sharing their reasoning and solutions. It is important that children solve problems in ways that make sense to them. Encourage your child to explain their mathematical thinking and solutions with math vocabulary at home.

Happy learning!
Ms. Getzfred and Ms. Densmore