



# EASTERN LANCASTER COUNTY SCHOOL DISTRICT

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Dear Parents/Guardians,

Over the next several weeks in third grade, we will be learning about Multiplication and Division with Factors of 2, 3, 4, 5, and 10. Attached is information which outlines what your child will be expected to learn during the unit.

There will be an assessment on this material in about 5 weeks. It would be helpful to review this information with your child at home and practice skip counting and math facts with your child. Let us know if you have any questions.

Thanks,  
The Third Grade Team

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## **Unit Overview:**

This unit builds upon the foundation of multiplicative thinking with units started in grade 2. First, students concentrate on the meaning of multiplication and division and begin developing fluency for learning products and representing and solving problems involving multiplication and division involving factors of 2, 3, 4, 5, and 10.

## **Focus Standards:**

- CC.2.2.3.A.1 - Represent and solve problems involving multiplication and division.
- CC.2.2.3.A.2 - Understand properties of multiplication and the relationship between multiplication and division.
- CC.2.2.3.A.3 - Demonstrate multiplication and division fluency.

## **Unit Essential Question:**

How do we fluently use multiplication and division and properties of multiplication to solve two step word problems? How do I solve two step equations using patterns and order of operations?

## **Unit Objective(s):**

At the end of this unit, students will be able to independently use their learning to:

- Interpret and/or describe products of whole numbers fluently within 100 (up to and including  $10 \times 10$ )
- Interpret and/or describe whole-number quotients of whole numbers (limit dividends through 50, and limit divisors and quotients through 10).
- Apply the commutative property of multiplication (not identification or definition of the property)

- Apply the associative property of multiplication (not identification or definition of the property)
- Solve two-step word problems using the four operations
- Represent two-step word problems using equations with a symbol standing for the unknown quantity. Limit to problems with whole numbers and having whole-number answers
- Assess the reasonableness of answers. Limit problems posed with whole numbers and having whole-number answers
- Solve two-step equations using order of operations (equation is explicitly stated with no grouping symbols)
- Identify arithmetic patterns (including patterns in the addition table or multiplication table) and/or explain those using properties of operations
- Create or match a story to a given combination of symbols and numbers
- Identify the missing symbol that makes a number sentence true
- Use multiplication (up to and including  $10 \times 10$ ) and/or division to solve word problems in situations involving equal groups, arrays, and/or measurement quantities
- Determine the unknown whole number in a multiplication (up to and including  $10 \times 10$ ) or division (limit dividends through 50), and limit divisors and quotients through 10) equation relating three whole numbers
- Interpret and/or model division as a multiplication equation with an unknown factor

#### Important Vocabulary:

Word	What it means	Example
multiply	To increase by equal amounts. This can be shown/proven with repeated addition and drawings of arrays.	$2 \times 3 = 6$ ** ** $2 + 2 + 2$ **
factors	The numbers multiplied together	$6 = 2 \times 3$ (2 and 3 are the factors)
product	The result of multiplying factors.	6 is the product in the equation above.
square number	The product of two of the same numbers	$3 \times 3 = 9$ (9 is a square number)
divide	To decrease by splitting into equal groups	$20 \div 5 = 4$ Split 20 into 5 equal groups. There will be 4 in each group.
divisor	The smaller number that a large number is being divided (split) by.	5 is the divisor in the equation above
quotient	The result of splitting a larger number into equal groups.	4 is the quotient in the equation above

**Example Problems:**

1. Mandy has 4 rows of tomato plants in her garden. There are 8 plants in each row. What is the total number of tomato plants in Mandy's garden ?

- (A) 12      (B) 28      (C) 32      (D) 36

2. Anna wants to check that she correctly solved the number sentence below.

$$32 \div 8 = 4$$

Which number sentence could Anna use to check to see if her answer is correct?

(A)

$$4 \times 8 = \square$$

(B)

$$8 \div 4 = \square$$

(C)

$$4 \times 32 = \square$$

(D)

$$32 \times 8 = \square$$

3. Marie invites 9 friends to a party. She buys a total of 63 stickers to give to her friends. If each friend gets the same number of stickers, and none are left over, how many stickers does Marie give to each friend?

*Show your work.*