

BELLEFONTE AREA SCHOOL DISTRICT
GRADE 4 THIRD MARKING PERIOD MATHEMATICS LEARNING OBJECTIVES

2.1 Numbers, Number Systems and Number Relationships

By the end of the third marking period, fourth grade students should be able to:

- 1. Demonstrate an understanding of the use of numbers by:**
 - Reading and writing whole numbers and decimals.
 - Identifying places in numbers and the values of the digits in those places.
 - Solving problems involving fractional parts of a region or a collection including identifying the whole.
 - Finding multiples and factors of numbers.
- 2. Demonstrate an understanding of ways to represent numbers by:**
 - Using numerical expressions to find and represent equivalent names for whole numbers, fractions, and decimals.
- 3. Demonstrate an understanding of number relationships by:**
 - Comparing and ordering integers, rational numbers, and decimals.

2.2 Computation and Estimation

By the end of the third marking period, fourth grade students should be able to:

- 1. Compute accurately by:**
 - Using mental arithmetic and paper-and-pencil algorithms to solve problems involving: addition and subtraction of whole numbers and decimals; multiplication and division of whole numbers; and addition and subtraction of fractions.
 - Demonstrating automaticity with multiplication facts through $10 * 10$ and proficiency with related division facts.
 - Using basic facts to compute fact extensions (e.g., $600 + 900$, $30 * 60$, etc.).
- 2. Make reasonable estimates by:**
 - Rounding whole numbers to a nearest place-value.
- 3. Demonstrate an understanding of the meanings of operations:** (Not assessed during third marking period)

2.3 Measurement and Estimation

By the end of the third marking period, fourth grade students should be able to:

- 1. Measure accurately by:**
 - Determining length to the nearest $\frac{1}{4}$ inch & $\frac{1}{2}$ centimeter.
 - Estimating and measuring the size of angles.
 - Using strategies to determine the perimeter and area of polygons.
 - Estimating the area of irregular shapes.
- 2. Use reference frames correctly (i.e. clocks, thermometers) by:**
 - Using ordered pairs of number to name, locate, and plot points.

2.6 Statistics and Data Analysis & 2.7 Probability and Predictions

By the end of the third marking period, fourth grade students should be able to:

- 1. Select and create graphs using data:** (Not assessed during third marking period)
- 2. Analyze and interpret data:** (Not assessed during third marking period)
- 3. Demonstrate an understanding of probability by:**
 - Describing events using basic probability terms.
 - Predicting the outcome of an experiment and testing those predictions using manipulatives.
 - Expressing the probability of an event as a fraction.

2.8 Algebra and Functions, 2.10 Trigonometry, & 2.11 Calculus

By the end of the third marking period, fourth grade students should be able to:

- 1. Demonstrate an understanding of patterns and functions:** (Not assessed during third marking period)
- 2. Use symbols to represent and analyze situations by:**
 - Determining whether number sentences are true or false.
 - Inserting parentheses to make number sentences true.
 - Applying the Distributive Property of Multiplication over Addition.

2.9 Geometry

By the end of the third marking period, fourth grade students should be able to:

- 1. Demonstrate an understanding of 2- and 3- dimensional shapes by:**
 - Drawing intersecting and parallel lines, line segments, and rays.
 - Identifying right, acute, and obtuse angles.
 - Describing and classifying plane and solid figures.
- 2. Apply transformations and symmetry:** (Not assessed during third marking period)