



New Meridian

# Montana Alternate Student Testing Pilot Math Assessment Training: MasteryGuide

Publish date



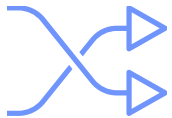
# Summary of MasteryGuide for Montana



13 testlets throughout the year



Administered in a single class period



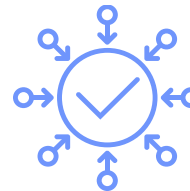
Flexibly aligns to local instruction



Machine scored for real-time classroom feedback



Measures fine-grained, instructionally relevant standards to inform instruction



Aggregates to a summative, year-end score



## Math Test Design Overview

- The MasteryGuide Assessment includes 12 testlets per grade. Each testlet consists of 10 single- or multi-part items
- Some testlets for grades 6, 7, and 8 will have an approved, digital calculator available in the Kite Student Platform. Calculator availability depends on the state Math standards to which the testlet is aligned.
- Each testlet is expected to be completed in less than 30 minutes, and most students should be able to complete two testlets in a 45-minute class period.
- The number and order of testlets in each administration window is dependent on your local curriculum scope and sequence.



New Meridian

# Content Coverage



# Content Coverage

12 Content Strands in Each Grade

## Grade 3

- Concepts of Multiplication and Division
- Multiplication and Division Equations
- Multiply and Divide Within 100
- Time, Liquid Volume, and Mass
- Real-World Problems and Patterns
- Place Value and Operations in Base Ten
- Understand Fractions as Numbers
- Compare and Find Equivalent Fractions
- Unit Squares and Square Units
- Solve Area Problems
- Data and Graphing
- Two-Dimensional Geometric Figures

## Grade 4

- Place Value in the Base Ten System
- Addition and Subtraction Algorithms
- Extend Concepts of Multiplication
- Multi-Digit Multiplication
- Multi-Digit Division
- Real-World Problems and Patterns
- Compare and Find Equivalent Fractions
- Add and Subtract Fractions
- Multiply Fractions
- Decimal Fractions
- Solve Measurement Problems
- Angles and Geometry



# Content Coverage

12 Content Strands in Each Grade

## Grade 5

- Numerical Expressions
- Place Value and Powers of Ten
- Represent and Compare Decimals
- Multiply and Divide Whole Numbers
- Operations with Decimals
- Add and Subtract Fractions
- Multiply Fractions
- Division with Fractions
- Unit Cubes and Cubic Units
- Solve Volume Problems
- Understand the First Quadrant
- Attributes of Geometric Figures

## Grade 6

- Concepts of Ratios and Unit Rates\*
- Percents and Measurement Conversions\*
- Divide Fractions
- Computational Fluency
- Rational Numbers and Absolute Value\*
- Algebraic Expressions and Exponents\*
- Equivalent Expressions\*
- Variables in Expressions and Equations\*
- Write and Interpret Inequalities\*
- Solve Problems with Area and Volume\*
- The Coordinate Plane\*
- Concepts of Statistics\*

\*calculator available



# Content Coverage

12 Content Strands in Each Grade

## Grade 7

- Ratios and Proportional Relationships\*
- Solve Problems with Ratio and Proportion\*
- Add and Subtract Rational Numbers
- Multiply and Divide Rational Numbers
- Expressions with Rational Numbers\*
- Solving Equations\*
- Solving Inequalities\*
- Solve Problems with Rational Numbers\*
- Angle Relationships and Triangles\*
- Solve Problems with Geometric Figures\*
- Measures of Center and Variability\*
- Probability\*

## Grade 8

- Understand and Use Irrational Numbers
- Exponent Rules and Scientific Notation
- Understand Functions\*
- Compare and Interpret Functions\*
- Construct Functions\*
- Linear Equations in One Variable\*
- Proportional Relationships and Lines\*
- Systems of Equations\*
- Pythagorean Theorem\*
- Geometric Transformations\*
- Similarity and Congruence\*
- Bivariate Data\*

\*calculator available



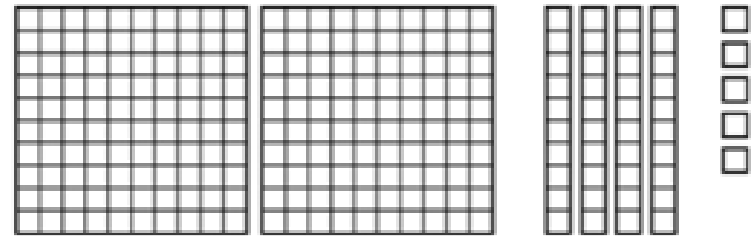
# Item Details

## Item Types

- Multiple Choice – Single Select
- Multiple Choice – Multiple Select
- Fill-in-the-Blank
- Equation Editor
- Inline Choice
- Match Table Grid
- Gap Match
- Graphic Gap Match
- Hot Spot
- Sequencing

## Sample Item

**11.** Max uses base-ten blocks to make this model of a number.



- a.** First, Max says the  is 0.01. What number does the model show? \_\_\_\_\_
- b.** Then, Max changes the values of the blocks so the same model shows a new number. Now, the  is 10 times the value it was before. What number does the model show now? \_\_\_\_\_
- 12.** Which expression shows one way to represent the number 2,506 in expanded form?
- A.  $(2 \times 10^4) + (5 \times 10^3) + (6 \times 10^2)$
  - B.  $(2 \times 10^4) + (5 \times 10^2) + (6 \times 10^1)$
  - C.  $(2 \times 10^3) + (5 \times 10^2) + (6 \times 10^1)$
  - D.  $(2 \times 10^3) + (5 \times 10^2) + (6 \times 10^0)$





New Meridian

# Engagement Opportunities



# Engagement and Feedback Opportunities

Scheduled throughout the year

- 1:1 interviews
  - Educators
  - Students
  - Parents
  - Administrators
- Monthly listening sessions/office hours
- Focus groups
  - Educators
  - Administrators
- Post-administration Surveys
  - Educators
  - Students
- Item Review Cadres
  - October
  - March
  - June





## Contact Information

[MASTpilot@newmeridiancorp.org](mailto:MASTpilot@newmeridiancorp.org)



Thank You!

