Wisconsin Mathematics

Essential Elements: Grade 8

The Number System 8.NS

A Know that there are numbers that are not rational and approximate them by rational numbers. M.8.NS.A

1 Subtract fractions with like denominators, including halves, thirds, fourths, and tenths with minuends less than or equal to one. M.EE.8.NS.1

2 Represent and compare fractions and decimal fractions to hundredths. M.EE.8.NS.2

a Express a fraction with a denominator of 100 as a decimal. M.EE.8.NS.2.A

b Using real world examples, compare quantities represented as decimals to hundredths. M.EE.8.NS.2.B

The Expressions and Equations 8.EE

A Work with radicals and integer exponents. M.8.EE.A

1 Identify and understand the meaning of exponents. M.EE.8.EE.1

2 Identify a geometric sequence of whole numbers with a whole number common ratio. M.EE.8.EE.2

3 Compose and decompose whole numbers up to 999. M.EE.8.EE.3

4 Compose and decompose whole numbers up to 999. M.EE.8.EE.4

B Understand the connections between proportional relationships, lines, and linear equations. M.8.EE.B

5 Graph a simple ratio by connecting the origin to a point representing the ratio in the form of y/x. For example, when given a ratio in standard form (2:1), convert to 2/1, and plot the point (1,2). M.EE.8.EE.5

6 Graph a simple ratio by connecting the origin to a point representing the ratio in the form of y/x. For example, when given a ratio in standard form (2:1), convert to 2/1, and plot the point (1,2). M.EE.8.EE.6

C Analyze and solve linear equations and pairs of simultaneous linear equations. (M) M.8.EE.C

7 Solve simple algebraic equations with one variable using addition and subtraction. M.EE.8.EE.7

8 Not applicable. See M.EE.8.EE.5.

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)efine, evaluate, and compare functions. M.8.F.A

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1 Given a table of data for a linear function containing at least 2 complete ordered pairs, identify a missing number that completes another ordered pair. M.EE.8.F.1

2 Given a table of data for a linear function containing at least 2 complete ordered pairs, identify a missing number that completes another ordered pair. M.EE.8.F.2

3 Given a table of data for a linear function containing at least 2 complete ordered pairs, identify a missing number that completes another ordered pair. M.EE.8.F.3

B Use functions to model relationships between quantities. (M) M.8.F.B

4 Determine the values or rule of a function using a graph or a table. M.EE.8.F.4

5 Describe how a graph represents a relationship between two quantities. M.EE.8.F.5

Geometry 8.G

A Understand congruence and similarity using physical models, transparencies, or geometry software. M.8.G.A

1 Recognize translations, rotations, and reflections of shapes. M.EE.8.G.1

2 Identify shapes that are congruent. M.EE.8.G.2

3 Not applicable.

4 Identify similar shapes with and without rotation. M.EE.8.G.4

5 Compare any angle to a right angle, and describe the angle as greater than, less than, or congruent to the right angle. M.EE.8.G.5

B Understand and apply the Pythagorean Theorem. (M) M.8.G.B

6 Not applicable.

7 Not applicable.

8 Not applicable.

C Solve real world and mathematical problems involving volume of cylinders, cones, and spheres.(M) M.8.G.C

9 Use the formulas for perimeter and area of rectangles, and volume of rectangular prisms to solve real-world and mathematical problems. M.EE.8.G.9

Statistics and Probability 8.SP

A Investigate patterns of association in bivariate data. (M) M.8.SP.A

1 Not applicable.

2 Not applicable. See M.EE.SP.ID.1.

3 Not applicable.

4 Construct a graph or table from given categorical data and interpret the data. M.EE.8.SP.4