Wisconsin Mathematics

Essential Elements: Grade 7

Ratios and Proportional Relationships 7.RP

A **Analyze proportional relationships and use them to solve real world and mathematical problems. (M)** M.7.RP.A

1 Use a ratio to model or describe a relationship. M.EE.7.RP.1

2 Use a ratio to model or describe a relationship. M.EE.7.RP.2

3 Use a ratio to model or describe a relationship. M.EE.7.RP.3

The Number System 7.NS

A **Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.** M.7.NS.A

1 Add fractions with like denominators (halves, thirds, fourths, and tenths)with sums less than or equal to one. M.EE.7.NS.1

2 Apply and extend previous understandings of multiplication, division, and fractions. M.EE.7.NS.2

a Multiply within 100 using strategies such as the properties of operations [e.g., knowing that 7 x 6 can be thought of as 7 groups of 6 so one could think 5 groups of 6 is 30 and 2 more groups of 6 is 12 and 30 + 12 = 42 (informal use of the distributive property)]. M.EE.7.NS.2.A

b Solve division problems within 100, including divisors of 1-5 and 10, without remainders. M.EE.7.NS.2.B

c Express a fraction with a denominator of 10 as a decimal. M.EE.7.NS.2.C

d Express a fraction with a denominator of 10 as a decimal. M.EE.7.NS.2.D

3 Using real world examples, compare quantities represented as decimals to tenths. M.EE.7.NS.3

The Expressions and Equations 7.EE

A **Use properties of operations to generate equivalent expressions.** M.7.EE.A

1 Use the properties of operations as strategies to demonstrate that expressions are equivalent. M.EE.7.EE.1

2 Identify an arithmetic sequence of whole numbers with a whole number common difference. M.EE.7.EE.2

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B **Solve real-life and mathematic al problems using numerical and algebraic expressions and equations. (M)** M.7.EE.B

3 Not applicable.

4 Use the concept of equality to solve one-step addition and subtraction equations with models. M.EE.7.EE.4

Geometry 7.G

A **Draw, construct, and describe geometrical figures and describe the relationships between them.** M.7.G.A

1 Match two similar geometric shapes that are proportional in size and have the same orientation. M.EE.7.G.1

2 Recognize geometric shapes with given conditions. M.EE.7.G.2

3 Match a two-dimensional shape with a three-dimensional shape that shares an attribute. M.EE.7.G.3

B **Solve real-life and mathematical problems involving angle measure, area, surface area, and volume. (M)** M.7.G.B

4 Determine the perimeter of a rectangle. M.EE.7.G.4

5 Recognize angles that are acute, obtuse, and right. M.EE.7.G.5

6 Determine the area of a rectangle using the formula for length x width and confirm the result using tiling or partitioning into unit squares. M.EE.7.G.6

Statistics and Probability 7.SP

A **Use random sampling to draw inferences about a population. (M)** M.7.SP.A

1 Answer a data related question, given a model of the data from a student experiment or collection. M.EE.7.SP.1

B **Draw informal comparative inferences about two populations. (M)** M.7.SP.B

2 Answer a data related question, given a model of the data from a student experiment or collection. M.EE.7.SP.2

3 Compare two sets of data found within a single data display such as a picture graph, line plot, or bar graph. M.EE.7.SP.3

4 Not applicable. See M.EE.SP.ID.4.

C **Investigate chance processes and develop, use, and evaluate probability models. (M)** M.7.SP.C

5 Describe the probability of events occurring as possible or impossible. M.EE.7.SP.5

6 Describe the probability of events occurring as possible or impossible. M.EE.7.SP.6

7 Describe the probability of events occurring as possible or impossible. M.EE.7.SP.7

8 Not applicable.