Iowa Essential Elements for Mathematics

Seventh Grade

Ratios and Proportional Relationships 7.RP

A. Major Cluster: Analyze proportional relationships and use them to solve real-world and mathematical problems. 7.RP.A

1 Use a ratio to model or describe a relationship. EE.7.RP.1-3

2 Use a ratio to model or describe a relationship. EE.7.RP.1-3

3 Use a ratio to model or describe a relationship. EE.7.RP.1-3

The Number System 7.NS

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

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

2.a Solve multiplication problems with products to 100. EE.7.NS.2.A

2.b Solve division problems with divisors up to five and also with a divisor of 10 without remainders. EE.7.NS.2.B

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

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

3 Compare quantities represented as decimals in real-world examples to tenths. EE.7.NS.3

Expressions and Equations 7.EE

A. Major Cluster: Use properties of operations to generate equivalent expressions. 7.EE.A

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

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

B. Major Cluster: Solve real-life and mathematical problems using numerical and algebraic expressions and equations. 7.EE.B

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

Geometry 7.G

A. Additional Cluster: Draw, construct, and describe geometrical figures and describe the relationships between them. 7.G.A

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

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

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

B. Additional Cluster: Solve real-life and mathematical problems involving angle measure, area, surface area, and volume. 7.G.B

4 Determine the perimeter of a rectangle by adding the measures of the sides. EE.7.G.4

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

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

Statistics and Probability 7.SP

A. Supporting Cluster: Use random sampling to draw inferences about a population. 7.SP.A

1 Answer a question related to the collected data from an experiment, given a model of data, or from data collected by the student. EE.7.SP.1-2

2 Answer a question related to the collected data from an experiment, given a model of data, or from data collected by the student. EE.7.SP.1-2

B. Additional Cluster: Draw informal comparative inferences about two populations. 7.SP.B

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

C. Supporting Cluster: Investigate and model chance processes. 7.SP.C

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

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

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