

## READINESS STANDARDS - Grade 6 Math

(6.1) **Number, operation, and quantitative reasoning.** The student represents and uses rational numbers in a variety of equivalent forms. The student is expected to

- |  |  |
|--|--|
| (B) generate equivalent forms of rational numbers including whole numbers, fractions, and decimals | Tenths, Hundredths, Thousandths, Numerator, Denominator, Rational numbers, Equivalent, Improper fraction, Mixed number |
|--|--|

(6.2) **Number, operation, and quantitative reasoning.** The student adds, subtracts, multiplies, and divides to solve problems and justify solutions. The student is expected to

- |   |   |
|---|---|
| (B) use addition and subtraction to solve problems involving fractions and decimals   | Common denominator, Numerator, Denominator, Simplify, Lowest terms, Simplest form, Mixed number |
| (C) use multiplication and division of whole numbers to solve problems including situations involving equivalent ratios and rates | Rate, Unit rate, Proportion, Ratio, Product, Quotient, Dividend, Divisor                        |
| (E) use order of operations to simplify whole number expressions (without exponents) in problem solving situations                | Simplify, Expression, Grouping symbols  |

(6.3) **Patterns, relationships, and algebraic thinking.** The student solves problems involving direct proportional relationships. The student is expected to

- |   |   |
|---|---|
| (C) use ratios to make predictions in proportional situations and rates | Ratio, Proportion, Unit rate, Constant rate of change |
|---|---|

(6.4) **Patterns, relationships, and algebraic thinking.** The student uses letters as variables in mathematical expressions to describe how one quantity changes when a related quantity changes. The student is expected to

- |   |  |
|---|--|
| (A) use tables and symbols to represent and describe proportional and other relationships such as those involving conversions, arithmetic sequences (with a constant rate of change), perimeter and area problem solving situations | Expression, Term in a sequence, Variable, Expression, Constant rate of change, Proportional, Perimeter, Area |
|---|--|

(6.5) **Patterns, relationships, and algebraic thinking.** The student uses letters to represent an unknown in an equation. The student is expected to

- |   |                              |
|---|------------------------------|
| (A) formulate equations from problem situations described by linear relationships | Variable, Constant, Equation |
|---|------------------------------|

(6.6) **Geometry and spatial reasoning.** The student uses geometric vocabulary to describe angles, polygons, and circles. The student is expected to

- |   |                                     |
|---|-------------------------------------|
| (C) describe the relationship between radius, diameter, and circumference of a circle | Radius, Diameter, Circumference, Pi |
|---|-------------------------------------|

(6.8) **Measurement.** The student solves application problems involving estimation and measurement of length, area, time, temperature, volume, weight, and angles. The student is expected to

- |   |   |
|---|---|
| (B) select and use appropriate units, tools, or formulas to measure and to solve problems involving length (including perimeter), area, time, temperature, volume, and weight | Perimeter, Area, Volume, Weight, Mass, Capacity |
|---|---|

## READINESS STANDARDS - Grade 6 Math

(6.10) **Probability and statistics.** The student uses statistical representations to analyze data. The student is expected to

(D) solve problems by collecting, organizing, displaying, and interpreting data

Line plot, Bar graph, Double bar graph, Line graph, Stem and leaf plot

## SUPPORTING STANDARDS - Grade 6 Math

(6.1) **Number, operation, and quantitative reasoning.** The student represents and uses rational numbers in a variety of equivalent forms. The student is expected to

(A) compare and order non-negative rational numbers

Comparison terms, greatest to least, fastest to slowest; Symbols such as  $<$  and  $>$ ; Least common denominator (LCD); Numerator; Denominator; Proper fraction; Improper fraction

(C) use integers to represent real-life situations

Positive integer, Negative integer

(D) write prime factorizations using exponents

Power, Exponent, Base, Prime factorization, Factor, Multiple, Prime, Composite, Squared, Cubed, Divisibility

(E) identify factors of a positive integer, common factors, and the greatest common factor of a set of positive integers

Factor, Greatest common factor (GCF), Prime, Composite

(F) identify multiples of a positive integer and common multiples and the least common multiple of a set of positive integers

Multiple, Least common multiple (LCM), Least common denominator (LCD)

(6.2) **Number, operation, and quantitative reasoning.** The student adds, subtracts, multiplies, and divides to solve problems and justify solutions. The student is expected to

(A) model addition and subtraction situations involving fractions with [objects,] pictures, words, and numbers

Numerator, Denominator, Sum, Difference, Total, Proper fraction, Improper fraction, Mixed number

(D) estimate and round to approximate reasonable results and to solve problems where exact answers are not required

Estimate, Round, Reasonable, Compatible numbers, Approximate

(6.3) **Patterns, relationships, and algebraic thinking.** The student solves problems involving direct proportional relationships. The student is expected to

(A) use ratios to describe proportional situations

Ratio, Proportion, Constant rate of change

(B) represent ratios and percents with [concrete] models, fractions, and decimals

Ratio, Percent, Benchmark, Equivalent, Proportion

(6.4) **Patterns, relationships, and algebraic thinking.** The student uses letters as variables in mathematical expressions to describe how one quantity changes when a related quantity changes. The student is expected to

(B) use tables of data to generate formulas representing relationships involving perimeter, area, volume of a rectangular prism, etc.

Variable, Expression, Equations, Formula, Position of term, Value of term, Sequence

## SUPPORTING STANDARDS - Grade 6 Math

(6.6) **Geometry and spatial reasoning.** The student uses geometric vocabulary to describe angles, polygons, and circles. The student is expected to

(A) use angle measurements to classify angles as acute, obtuse, or right

Acute, Obtuse, Right, Straight

(B) identify relationships involving angles in triangles and quadrilaterals

Acute, Obtuse, Right, Scalene, Equilateral, Vertex, Degree, Ray, Base angle, Congruent, Similar, Regular

(6.7) **Geometry and spatial reasoning.** The student uses coordinate geometry to identify location in two dimensions. The student is expected to

(A) locate and name points on a coordinate plane using ordered pairs of non-negative rational numbers

Ordered pair, Coordinate plane, Origin, X-axis, Y-axis

(6.8) **Measurement.** The student solves application problems involving estimation and measurement of length, area, time, temperature, volume, weight, and angles. The student is expected to

(A) estimate measurements (including circumference) and evaluate reasonableness of results

Estimate, Round, Evaluate, Compatible numbers, About, Approximately

(C) measure angles

Angle, Ray, Segment, Line, Vertex, Protractor, Acute, Obtuse, Right, Straight, Degree

(D) convert measures within the same measurement system (customary and metric) based on relationships between units

Customary measurement system, Metric measurement system, Conversion

(6.9) **Probability and statistics.** The student uses experimental and theoretical probability to make predictions. The student is expected to

(A) construct sample spaces using lists and tree diagrams

Sample space, Tree diagram, Simple event, Compound event

(B) find the probabilities of a simple event and its complement and describe the relationship between the two

Simple event, Complement, Experimental probability, Theoretical probability

(6.10) **Probability and statistics.** The student uses statistical representations to analyze data. The student is expected to

(A) select and use an appropriate representation for presenting and displaying different graphical representations of the same data including line plot, line graph, bar graph, and stem and leaf plot

Line plot, Line graph, Bar graph, Stem and leaf plot, Scale, Interval, Increment

(B) identify mean (using [concrete objects and] pictorial models), median, mode, and range of a set of data

Mean, Median, Mode, Range, Measure of central tendency, Average

(6.10) **Probability and statistics.** The student uses statistical representations to analyze data. The student is expected to

(C) sketch circle graphs to display data

Circle graph, Center, Diameter, Radius, Angle