



# Smarter Balanced Construct Relevant Vocabulary for Mathematics

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## Smarter Balanced Construct Relevant Vocabulary for Mathematics

“Construct relevant vocabulary” refers to any mathematics term that students should know because it is essential to the construct of the content area. As such, these terms should be part of instruction.

These are words that may appear in assessment stems or options on the Smarter Balanced Assessment even though the EDL Core Vocabularies in Reading, Mathematics, Science, and Social Studies might identify these terms as above grade level for general use. Because these terms are part of mathematics instruction in the classroom, they are considered construct relevant and thus allowable for this use.

The following list of “construct relevant vocabulary” was compiled by the Oregon Department of Education using information provided by Smarter Balanced Mathematics Leads in the Item Specifications. This list

- is intended to inform item writers about glossary eligibility.
- includes words that will not be glossed at the identified grade.
- is **not** intended to be a default vocabulary curriculum; instead, the list of terms is intended as an instructional resource to ensure that teachers remember to embed these terms into their instruction.
- is not a complete list of terms of terms to be used for instruction.
- is a working document. It is neither “finished” nor is it all-inclusive.

Note: Some words are not repeated in subsequent grades because it is assumed students are familiar with them because they have been part of instruction in previous grades.



## Smarter Balanced Construct Relevant Vocabulary for Mathematics

### Grade 3

**Target A:** multiply, divide, array, liquid volume, mass, equation, product, quotient, grams, kilograms, liters

**Target B:** divide, equation, multiply, factor, equal, operation, product, quotient, expression

**Target C:** equation, multiply, divide, product, quotient, factor

**Target D:** equation, multiply, divide, factor, product, quotient, subtract, add, addend, sum, difference, estimation, estimate, rounding, patterns

**Target E:** round to the nearest, add, subtract, sum, difference, multiply, place value, addend

**Target F:** equal, denominator, numerator, less than, greater than, number line

**Target G:** grams (g), kilograms (kg), liters (L), estimate, time, time intervals, minute, hour, measure, liquid volume, mass, standard units, metric

**Target H:** scaled bar graph, scaled picture graph, line plot

**Target I:** unit square, area, square unit, plane figure, square centimeter, square meter, square inch, square feet

**Target J:** perimeter, quadrilateral, rectangle, area, polygon, plane figure

**Target K:** divide, equal areas, rhombus, rectangle, circle, triangle, pentagon, hexagon, quadrilateral, parallelogram

### Grade 4

**Target A:** remainder, sum, difference, quotient, product, equation, times, as much, times as many, equation

**Target B:** whole number, prime composite, factor, factor pair, multiple

**Target C:** pattern

**Target D:** nearest ten, nearest hundred, nearest thousand, nearest ten thousand, nearest hundred thousand, ones, tens, hundreds, thousands, ten thousands, hundred thousands, millions

**Target E:** sum, difference, product, expression, equation, equal, partial product, quotient, partial quotient, remainder multiple

**Target F:** fraction, equivalent, divide, equal to, greater than, less than, digits, numerator, denominator

**Target G:** equation, expression, equal, fraction, model, product, numerator

**Target H:** equivalent, equal, decimal, kilometers, meters, centimeters, kilograms, grams, liters, milliliters, length, mass, volume, number line, fraction, denominator, equation, expression

**Target I:** equivalent, mass, volume, interval, area, perimeter, square units

**Target J:** line plot, data set, interval, fractions, unit fractions, numerator, denominator, sum, difference, add, subtract

**Target K:** protractor, angle, ray, intersect, one-degree angle, vertex, ray

**Target L:** point, ray, angle, line, line segment, parallel, perpendicular, right, obtuse, acute, sides, polygon, triangle, quadrilateral, pentagon, hexagon, octagon, right triangle, line of symmetry, greater than, less than, equal to



## Smarter Balanced Construct Relevant Vocabulary for Mathematics

### Grade 5

- Target A:** sum, quotient, factor, dividend, divisor
- Target B:** coordinates, ordered pairs, pattern, sequence
- Target C:** round, digit, value, greater than, less than, equal to, equivalent, expression, expanded form, hundredths, tenths, thousandths, word form
- Target D:** array, area model, equation, quotient, product, factor, divisor, dividend, remainder
- Target E:** equivalent fractions, denominators, numerators, mixed numbers
- Target F:** fraction, equivalent, denominator, numerator, sum, difference, product, mixed number
- Target G:** mass, weight, length, time, kilometer, meter, centimeter, kilogram, gram, liter, milliliter, inch, foot, yard, mile, ounce, pound, cup, pint, quart, gallon, hour, minute, second
- Target H:** line plot, table, measurement, data set, interval, unit fraction, mixed number
- Target I:** area array, right rectangular prism, associative property, cube, volume, length, width
- Target J:** origin, coordinate plane, coordinate system, coordinate pair, x-coordinate, y-coordinate, first quadrant, point, x-axis, y-axis, ordered pair
- Target K:** right, acute, obtuse, line segments, parallel, perpendicular, symmetrical, line of symmetry

### Grade 6

- Target A:** ratio, unit rate, unit price, ordered pairs
- Target B:** fraction, quotient, product
- Target C:** sum, difference, product, quotient, common factor, greatest common factor, common multiple, least common multiple, distributive property
- Target D:** positive, negative, integer, absolute value, coordinate, ordered pair, coordinate grid/plane, quadrant, number line, relative position, magnitude
- Target E:** sum, product, quotient, difference, negative, term, factor, coefficient, expression, algebraic expression, numerical expression, order of operations, distributive property, associative property, commutative property
- Target F:** variable, equation, inequality, solution, solution set
- Target G:** variable, equation, inequality, dependent variable, independent variable, relation
- Target H:** coordinate, ordered pair, coordinate plane, compose/decompose, vertices, right triangle, unit fraction, edge length, area, surface area, volume, nets, faces, edges, vertices
- Target I:** variation(variability), interquartile range, range, mean absolute deviation, center, spread, mean, median, outliers, shape (pertaining to statistics such as gap, cluster, peak, skew, bell curve and uniform distribution)
- Target J:** variability, interquartile range, range, mean absolute deviation, outliers, center, spread, mean, median, shape (pertaining to statistics such as gap, cluster, peak, skew, bell curve, and uniform distribution)



## Smarter Balanced Construct Relevant Vocabulary for Mathematics

### Grade 7

**Target A:** proportional relationship, ratio, unit rate, constant of proportionality, origin, percent increase, percent decrease, percent error

**Target B:** rational numbers, absolute value, positive, negative, additive inverse, sum, difference, terminating decimal, repeating decimal, integer

**Target C:** sum, difference, factor, rational coefficient, linear expression, distributive property of multiplication, associative property of addition/multiplication, commutative property of addition/multiplication

**Target D:** rational number, equation, numeric expression, inequality, variable, constant, solution, solution set, distributive property of multiplication over addition, commutative property of addition/multiplication, associative property of addition/multiplication, additive/multiplicative identity, additive/multiplicative inverse

**Target E:** scale drawing, scale, scale factor, ratio, proportion, polygon, triangle (right, acute, obtuse, equilateral, isosceles, scalene), quadrilateral, trapezoid, parallelogram, cube, right-rectangular prism, right-rectangular pyramid, square pyramid, cone, cylinder, plane, perpendicular, parallel, base of a three-dimensional figure, horizontal slice, vertical slice

**Target F:** area, circumference, pi, circle, radius, diameter, supplementary angles, complementary angles, vertical angles, adjacent angles, linear pairs of angles, volume, surface area, triangles, quadrilateral, square, rectangle, parallelogram, trapezoid, cubes, right prisms

**Target G:** random sample, representative sample, inference, validity, variation, data sets, prediction

**Target H:** numerical data distribution, center, variability, random sample, comparative inference, mean, median, mean absolute deviation, range, interquartile range

**Target I:** single event, compound event, probability model, tree diagram, outcome, frequencies



## Smarter Balanced Construct Relevant Vocabulary for Mathematics

### Grade 8

**Target A:** rational number, irrational number, repeating decimal, terminating decimal, square root, pi

**Target B:** rational number, irrational number, scientific notation, decimal notation, exponent, power, base, radical, square root, cube root, perfect square, perfect cube, exponent

**Target C:** proportional relationship, unit rate, slope, y-intercept, similar triangles, origin, coordinate plane, ordered pairs

**Target D:** linear equation, y-intercept, slope, standard form, intersection, system, solution, coefficient, constant, ordered pair, x-coordinate, y-coordinate

**Target E:** function, relation, linear, nonlinear, ordered pairs, coordinate grid, rate of change, y-intercept, x-intercept, slope

**Target F:** function, slope, y-intercept, linear, nonlinear, rate of change, increasing, decreasing, constant, interval, relation

**Target G:** angle, transformation, translation, translate, rotation, rotate, reflection, reflect, dilation, dilate, line segment, similar, congruent, parallel, transversal, exterior angle, interior angle, angle-angle criterion, scale factor, vertical angles, adjacent angle, supplementary angles, complementary angles

**Target H:** Pythagorean Theorem, leg, hypotenuse, right triangle, base

**Target I:** volume, cylinder, cone, sphere, radius, diameter, area, base, pi

**Target J:** cluster, data, frequency, initial value, line of best fit, trend line, linear extrapolation, linear association, negative association, outlier, positive association, rate of change, relative frequency, scale, scatter plot, slope, two-way relative frequency table, variable, x-axis, y-axis, x-intercept, y-intercept



## Smarter Balanced Construct Relevant Vocabulary for Mathematics

### High School

**Target A:** exponent, radical, rational exponent

**Target B:** rational number, irrational number, real number

**Target C:** square units, cubic units, unit conversion, axis scale

**Target D:** expression, factor, difference of squares, difference of cubes, sum of cubes, quadratic expression

**Target E:** monomial, binomial, trinomial, polynomial, maximum value, minimum value, zero (of a function)

**Target F:** terms, factors, coefficients, monomials, binomials, trinomials, polynomials, exponents, expressions, distribute, distributive property, sum, difference, product, like terms

**Target G:** inequality, exponential, quadratic, simple rational, or exponential

**Target H:** radical, rational, real, solution

**Target I:** quadratic formula, factoring quadratic equations, completing the square

**Target J:** linear inequality, system of equations, system of inequalities, polynomial function, rational function, absolute value function, exponential function, logarithmic function, coordinate plane (or coordinate grid), half-plane, open half-plane, closed half-plane

**Target K:** domain, range, function, input, output, sequence, relation, ordered pair(s)

**Target L:** x-intercept, y-intercept, interval, increasing interval, decreasing interval, relative maximum, relative minimum, symmetry, axis of symmetry, end behavior of a graph, limit, periodicity, average rate of change

**Target M:** quadratic, square root, cube root, piecewise-defined, polynomial, exponential, logarithmic, x-intercept, y-intercept, interval, relative maximum, relative minimum, symmetry, axis of symmetry, end behavior of a graph, limit, periodicity

**Target N:** function(s), quantity, quantities, explicit, recursive, arithmetic sequence, geometric sequence, input, output, ordered pairs

**Target O:** trigonometry, trigonometric ratio, right triangle, sine, cosine, tangent, side, Pythagorean Theorem

**Target P:** mean, median, interquartile range, outlier, standard deviation