Grades 6-8 Vocabulary

adapted from MSP Mathematics Test & Item Specifications, December 2009

- ☐ absolute value, 7
- ☐ angles, adjacent, 8
- ☐ angles, complementary, 8
- ☐ angles, corresponding, 7
- ☐ angles, interior, 8
- ☐ angles, supplementary, 8
- ☐ angles, vertical, 8
- ☐ approximate, 6
- ☐ axis/axes, 6
- ☐ bias, 7
- ☐ box-and-whisker plot, 8
- ☐ circle graph, 7
- ☐ circumference, 6
- ☐ clockwise, 8
- ☐ cluster, 8
- ☐ complement, (probability), 6
- ☐ conclude/conclusion, 6
- ☐ cone, 7
- ☐ construct, 6
- ☐ coordinate plane, 8
- ☐ corresponding sides, 7
- ☐ counterclockwise, 8
- ☐ cube, 6
- ☐ cylinder, 7
- ☐ diameter, 6
- ☐ dilation, 8
- ☐ edge, 6
- ☐ event, 6
- ☐ event, dependent, 8
- ☐ event, independent, 8
- ☐ events, mutually exclusive, 8
- ☐ exponent, 7
- ☐ face, 6
- ☐ function, 8
- ☐ height, slant, 6
- ☐ hypotenuse, 8
- ☐ identify, 6
- ☐ image, 8
- ☐ integer, 6
- ☐ intercept, 8
- ☐ interquartile range, 8
- ☐ interval, 6
- ☐ inverse, 6
- ☐ justify, 6
- ☐ law of exponents, 8
- ☐ linear equation, 7
- ☐ linear function, 8
- ☐ linear inequality, 8
- ☐ maximum, 7
- ☐ measure of center, 7
- ☐ metric system, 7
- ☐ minimum, 7
- ☐ net (geometry), 6
- ☐ number, irrational, 8
- ☐ number, rational, 7
- ☐ order of operations, 6
- ☐ outcome, 7
- ☐ outlier, 7
- ☐ per, 6
- ☐ percent, 6
- ☐ perfect square (of an integer), 8
- ☐ pi (π), 6
- ☐ polyhedron, 6
- ☐ polyhedron, regular, 6
- ☐ power (exponent), 8
- ☐ predict, 7
- ☐ prime factorization, 7
- ☐ prism, 6
- ☐ probability, experimental, 6
- ☐ probability, theoretical, 6
- ☐ property, distributive, 6
- ☐ property, identity, 6
- ☐ proportion, 6
- ☐ proportional, 6
- ☐ pyramid, 6
- ☐ Pythagorean theorem, 8
- ☐ quartile, 8
- ☐ quartile, lower, 8
- ☐ quartile, upper, 8
- ☐ radical, 8
- ☐ radius/radii, 6
- ☐ random sample, 8
- ☐ rate, 6
- ☐ rate, unit, 6
- ☐ ratio, 6
- ☐ reflection, 8
- ☐ relationship (relation), 6
- ☐ rotation, 8
- ☐ sample space, 7
- ☐ scale (proportion), 7
- ☐ scale drawing, 7
- ☐ scale factor, 7
- ☐ scatter plot, 8
- ☐ scientific notation, 8
- ☐ semicircle, 6
- ☐ similar figures, 7
- ☐ slope, 7
- ☐ solution, 6
- ☐ square root, 8
- ☐ standard form, 8
- ☐ stem-and-leaf plot, 7
- ☐ surface area, 6
- ☐ tetrahedron, 6
- ☐ three-dimensional, 6
- ☐ transformation, 8
- ☐ translation, 8
- ☐ transversal, 8
- ☐ trend line, 8
- ☐ two-dimensional, 6
- ☐ U.S. Customary system, 7
- ☐ variability, 7
- ☐ Venn diagram, 8
- ☐ verify, 6
- ☐ volume, 6

Additional Vocabulary

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Grades 6-8 Item Specification Information[1] . . . . . .

Measurement formulas and grade level first-used in assessment items

Measurement Formulas	PE
Circumference and area of a circle	6.4.A
Perimeter and area of composite figures	6.4.B
Surface area and volume of rectangular prism using formulas	6.4.E
Surface area of a pyramid	6.4.F
Surface area and volume of cylinders using formulas	7.3.A
Volume of pyramids and cones using formulas	7.3.B
Determine missing angle measures	8.2.C
Know and apply Pythagorean theorem	8.2.F 8.2.G

Data displays assessed in grades 6-8 . . .

Construct/ Display	Extract for a Purpose	Type	Description
	6.6.G	Pictograph	A diagram that uses pictures or symbols to compare data. Each picture may represent one or more data value.
	6.6.G	Frequency Table	A table that shows the category names used to sort a data set, a tally of the data set by category, and a number for the total number of occurrences in each category.
	6.6.G	Line Plot	A plot that shows the frequency of data on a number line.
8.3.B	8.3.B		
	6.6.G	Bar Graph	A graph that uses the length of solid bars to represent numbers and compare data.
	6.6.G	Line Graph	A graph that uses one or more lines to show changes in data when there is a numeric value associated with equally spaced points along a continuous number scale.
	7.6.G		
	8.5.G		
7.4.D	7.4.D	Stem-and-Leaf Plot	A plot that organizes data from least to greatest using the digits of the greatest place value to group data.
	7.6.G		
8.3.B	8.3.B		
	8.5.G		
7.4.D	7.4.D	Histogram	A bar graph that uses two scales, one for equally spaced intervals (replaces categories) and one for frequencies.
	7.6.G		
8.3.B	8.3.B		
	8.5.G		
7.4.D	7.4.D	Circle Graph	A graph that uses a divided circle to show pictorially how a total amount is divided.
	7.6.G		
8.3.B	8.3.B		
	8.5.G		
8.3.B	8.3.B	Box-and-Whisker Plot	A plot that displays the median, quartiles, and outliers of a set of data. Also called a box-plot.
	8.5.G		
8.3.C	8.3.C	Scatter Plot	A graph consisting of points, one for each item being measured. The two coordinates of a point represent the measures of two attributes of each item.
	8.5.G		
8.3.G	8.3.G	Venn Diagram	A diagram that shows grouping of people or objects in overlapping categories.
	8.5.G		

Conversions . . .

- In grades 3-6, students are expected to convert within a measurement system but not between measurement systems. For example, 3 feet = 1 yard is a conversion within the U.S. customary system, but 1 yard = 0.91 meter is a conversion between U.S. Customary and metric systems.
- In grades 7 and 8, students may be asked to convert between systems and conversion factors are provided.
- Most dictionaries list conversion factors.

Mathematics symbols first-used in assessment items.

Operation/Geometry	Symbol	Grade
multiplication	•	6
square root	$\sqrt{}$	8
absolute value	| |	7
less than or equal to	≤	8
greater than or equal to	≥	8
not equal to	≠	8
line segment AB	$\overline{AB}$	7
angle A	∠A	8
triangle ABC	Δ ABC	8
perpendicular	⊥	8
parallel	||	8
congruent	≅	6

Computational guidelines . . .

	Numbers	Operations/Expectation	P.E.
6th Grade	Non-negative rational numbers	Multiply/Divide fractions (with denominators of 2-10 or multiples of 2-10 ≤ 100)	6.1.D
		Multiply/divide whole numbers and decimals by powers of ten (by 1,000, 100, 10, 1, 0.1, 0.01, 0.001)	6.1.E
		Multiply/divide non-negative decimals (products to thousandths place; divisor to tenths place; dividend to hundredths place)	6.1.F
7th	Rational	Add, subtract, multiply, divide; Absolute value (fractions whose decimal equivalence terminates up to thousandths)	7.1.C 7.1.D
8th Grade	Real	Square roots (quickly recall square roots of perfect squares from 1 to 225; estimates of square roots of other positive numbers less than 225)	8.2.E
		Computation with scientific notation (powers of ten from 10^{-3} to 10^{9})	8.4.B
		Computation with exponents (non-negative integer exponents ≤ 10)	8.4.C

[1] Additional information in the MSP Mathematics Test & Item Specifications for Grades 6-8.