

Academic Vocabulary

CONTENT BUILDER FOR THE PLC

MATH
GRADE 7

PLEASE NOTE: The words contained in **Academic Vocabulary** are words/concepts/terms essential for concept development; this list is not intended to be comprehensive. The “new to grade level” vocabulary suggestions are a starting point, and educators are encouraged to refer to their district curriculum resources for additional words/concepts/terms.

Rational Number Representations and Operations

- 7.2 Number and operations.** The student applies mathematical process standards to represent and use rational numbers in a variety of forms.
- 7.3 Number and operations.** The student applies mathematical process standards to add, subtract, multiply, and divide while solving problems and justifying solutions.

important words for concept development			
subcluster	standards	new to grade level	
Representation	7.2(A)	integer* rational number* whole number*	
Operations	7.3(A), 7.3(B)	denominator difference dividend division divisor factor improper fraction	mixed number numerator product quotient reciprocal simplified form sum

Proportional Reasoning

- 7.4 Proportionality.** The student applies mathematical process standards to represent and solve problems involving proportional relationships.
- 7.7 Expressions, equations, and relationships.** The student applies mathematical process standards to represent linear relationships using multiple representations.

important words for concept development			
subcluster	standards	new to grade level	previously introduced
Constant Rate of Change	7.4(A), 7.4(B), 7.4(C)	$d = rt^*$, constant rate of change* $y = kx$, constant of proportionality*	per* proportion rate of change ratio unit rate
Conceptual Development of Non-Proportional	7.7(A)	non-proportional	dependent quantity independent quantity per (unit rate)* proportional
Conversions	7.4(E)		customary (mile*/yard/feet*/inch*; gallon/quart/pint/cup/fluid ounce*; ton/pound/ounce) metric (kilometer*/meter/centimeter*/millimeter*; liter/milliliter; kilogram/gram*/milligram) proportion unit rate
Ratios/Rates/Percentages	7.4(D)	percent decrease percent increase*	proportion* rate* ratio*

Probability

7.6 Proportionality. The student applies mathematical process standards to use probability and statistics to describe or solve problems involving proportional relationships.

important words for concept development			
subcluster	standards	new to grade level	previously introduced
Representation	7.6(A), 7.6(B)	compound event dependent event independent event outcome* probability	probability experiment* sample space simple event tree diagram
Determination	7.6(E), 7.6(I)	complement compound event dependent event experimental probability* independent event	probability* random*/randomly* sample space simple event theoretical probability
Application	7.6(C), 7.6(D), 7.6(F), 7.6(H)	compound event dependent event equally likely* experimental data independent event less likely*	more likely* outcome* probability* random sample simple event theoretical probability

Equations and Inequalities

- 7.10 Expressions, equations, and relationships.** The student applies mathematical process standards to use one-variable equations and inequalities to represent situations.
- 7.11 Expressions, equations, and relationships.** The student applies mathematical process standards to solve one-variable equations and inequalities.

important words for concept development				
subcluster	standards	new to grade level		previously introduced
Representation and Solutions	7.10(A), 7.10(B), 7.11(A), 7.11(B)			coefficient constant equation* greater than or equal to greater than/more than* inequality* less than or equal to
				less than/fewer than maximum/at most*; met or exceed minimum/at least* solution set* variable
Application	7.10(C), 7.11(C)	complementary angles supplementary angles		adjacent angle angle* area equation* greater than or equal to greater than/more than* inequality less than or equal to less than/fewer than
				maximum/at most; met or exceed minimum/at least perimeter straight angle variable vertical angle volume

Geometry and Measurement

- 7.4 Proportionality.** The student applies mathematical process standards to represent and solve problems involving proportional relationships.
- 7.5 Proportionality.** The student applies mathematical process standards to use geometry to describe or solve problems involving proportional relationships.
- 7.8 Expressions, equations, and relationships.** The student applies mathematical process standards to develop geometric relationships with volume.
- 7.9 Expressions, equations, and relationships.** The student applies mathematical process standards to solve geometric problems.
- 7.11 Expressions, equations, and relationships.** The student applies mathematical process standards to solve one-variable equations and inequalities.

important words for concept development					
subcluster	standards	new to grade level		previously introduced	
Conversions	7.4(E)			customary (mile*/yard/feet*/inch*; gallon/quart/pint/cup/fluid ounce*; ton/pound/ounce) metric (kilometer*/meter/centimeter*/millimeter*; liter/milliliter; kilogram/gram*/milligram) proportion unit rate	
Area	7.9(C), 7.9(D)	π (pi) diameter lateral surface area* net* quarter circle radius	rectangular pyramid semicircle* square pyramid* total surface area* triangular pyramid	area* composite figure congruent* formulas (area): • $A = \frac{1}{2}bh$ • $A = bh$ • $A = \frac{1}{2}(b_1 + b_2)$	height rectangle* rectangular prism* square trapezoid* triangle* triangular prism
Volume	7.8(A), 7.8(B), 7.9(A)	formulas (volume): • $V = Bh$ • $V = \frac{1}{3}Bh$ height* of prism/pyramid rectangular pyramid square pyramid* triangular pyramid		area of the base* base congruent formula (volume): • $V = Bh$ (for rectangular prisms only)	height* rectangular prism* triangular prism* volume*

Geometry and Measurement (continued)

- 7.4 Proportionality.** The student applies mathematical process standards to represent and solve problems involving proportional relationships.
- 7.5 Proportionality.** The student applies mathematical process standards to use geometry to describe or solve problems involving proportional relationships.
- 7.8 Expressions, equations, and relationships.** The student applies mathematical process standards to develop geometric relationships with volume.
- 7.9 Expressions, equations, and relationships.** The student applies mathematical process standards to solve geometric problems.
- 7.11 Expressions, equations, and relationships.** The student applies mathematical process standards to solve one-variable equations and inequalities.

important words for concept development				
subcluster	standards	new to grade level		previously introduced
Similarity	7.5(A), 7.5(C)	corresponding angle*/side length similar shape*		scale* factor congruent proportion* ratio
Angle Relationships	7.11(C)	complementary angles supplementary angles		adjacent angle angle* area equation* inequality perimeter straight angle variable vertical angle volume
Circles	7.5(B), 7.8(C), 7.9(B)	π (pi)* circumference* diameter* radius*	formulas: • $C = 2\pi r$ • $C = \pi d$ • $A = \pi r^2$	ratio*

Data Analysis

- 7.6 Proportionality.** The student applies mathematical process standards to use probability and statistics to describe or solve problems involving proportional relationships.
- 7.12 Measurement and data.** The student applies mathematical process standards to use statistical representations to analyze data.

important words for concept development				
subcluster	standards	new to grade level		previously introduced
Interpretation	7.6(G), 7.12(B)	certain*	bar graph*	part-to-part
		random sampling*	circle graph*	part-to-whole
Comparison	7.12(A), 7.12(C)		dot plot*	percent
			asymmetrical	median*
			box plot*	mode*
			center	outlier
			center	quartile*
			dot plot*	range*
			interquartile range* (IQR)	shape of the data distribution*
			mean	skew*
			measures of center	spread
			measures of spread	symmetrical*

Personal Financial Literacy

7.13 Personal financial literacy. The student applies mathematical process standards to develop an economic way of thinking and problem solving useful in one's life as a knowledgeable consumer and investor.

important words for concept development					
subcluster	standards	new to grade level		previously introduced	
Budgets	7.13(B), 7.13(C)	asset*		budget	savings*
		financial asset*		expense*	tax
		liability*		fixed expense	variable expense
		net worth*		income*	
		net worth statement*			
		retirement			
Calculations	7.13(A), 7.13(B), 7.13(D), 7.13(E), 7.13(F)	compound interest	principal	% (percent)*	interest*
		coupon	rebate*	deposit*	loan*
		discount*	sales tax*	expense*	rate*
		formulas:	simple interest*	income	withdrawal*
		• $I = Prt$		income tax*	
		• $A = P(1 + r)^t$			