Level D CCRS Checklist   Math

Name_____

Number Sense		
Apply and extend previous understandings of numbers to the system of rational numbers.		TABE
Date of Mastery		D
	Understand positive and negative numbers describe opposite quantities, explain meaning of 0 (6.NS.5)	2, 22, 37
		2, 3
	Understand a rational number as a point on the number line (6.NS.6)*	**6, 17**
	Understand ordering and absolute value of rational numbers (6.NS.7)*	**7**
	Solve problems using all four quadrants of coordinate planes. Find distances between two points (6.NS.8)	6
		35
Apply and extend previous understandings of operation with fractions to use all 4 operations with rational numbers.		
	Add and subtract rational numbers (7.NS.1)*	5, 40
		38
	Multiply and Divide rational numbers (7.NS.2)*	17, 30
		16
	Solve real world and mathematical problems using the four operations with rational numbers (7.NS.3)	
Know that there are numbers that are not rational, and approximate them by rational numbers		
	Use rational approximations of irrational numbers to compare the size of irrational numbers (√2)(8.NS.2)	16
Understand ratio concepts and ratio reasoning to solve problems.		
	Use ratio and rate reasoning to solve real-world and mathematical problems (6.RP.3)*	31
Analyze proportional relationships and use them to solve real-world and mathematical problems.		
	Compute unit rates associated with fractional ratios, include lengths, areas and other quantities (7.RP.1)	8A, 8B
		31
	Recognize and represent proportional relationships between quantities (7.RP.2)*	23, 35, 39
	Use proportional relationships to solve multistep ratio and percent problems (7.RP.3)	31
Algebra		
Use properties of operations to generate equivalent expressions.		
	Add, subtract, factor and expand linear expressions with rational coefficients (7.EE.1)	28A, 28B
	Understand that rewriting an expression in different forms in a problem can shed light on the problem and how the quantities are related (7.EE.2)	
Solve real-life and mathematical problems using numerical and algebraic expressions and equations.		
	Solve multistep problems posed with positive/negative rational numbers in any form using tools strategically. Convert between forms as appropriate and assess reasonableness of answers (7.EE.3)	36
	Use variables to represent quantities and construct simple equations and inequalities to solve (7.EE.4)*	4
		21, 24
Work with radicals and integer exponents.		
	Know and apply properties of integer exponents to generate equivalent numerical expressions (8.EE.1)	
	Use square root and cube root symbols to represent solutions to equations. Know simple perfect square and cube roots. (8.EE.2)	33
		10, 22, 28
	Use numbers expressed in the form of a single digit times an integer power of 10 to estimate very large or small quantities, and express how many times as much one is than the other (8.EE.3)	
	Perform operations with numbers expressed in scientific notation (8.EE.4)	**37**
Understand the connections between proportional relationships, lines, and linear equations.		
	Graph proportional relationships, interpreting unit rate as the slope. Compare two proportional relationships represented in different ways (graph and equation) (8.EE.5)	
		15, 33
Analyze and solve linear equations and pairs of simultaneous linear equations.		
	Solve linear equations in one variable (8.EE.7)*	

*See sub-standards in CCRS book   TABE 11 in Regular Print   Test Answers may be found in more

Checklist created by Kerin Hanson with Bemidji ABE   TABE 12 in **Bold**   than one category on the checklist.

	Analyze and solve pairs of simultaneous linear equations (8.EE.8)*	3

Define, evaluate, and compare functions.

	Understand that a function is a rule that assigns each input exactly one output (8.F.1)	18
		11, 40
	Interpret that equation y = mx + b defines a linear function, give examples of non-linear equations (8.F.3)	19
		1, 14, 20

Use functions to model relationships between quantities.

	Construct a function to model a linear relationship between two quantities (8.F.4)	9A, 9B, 34, 35
		12, 13
	Describe qualitatively the functional relationship between two quantities by analyzing a graph (8.F.5)	15
		5

Geometry

Draw, construct, and describe geometrical figures and describe the relationships between them.

	Solve problems involving scale drawings of geometric figures (7.G.1)	11

Solve real-life and mathematical problems involving angle, measure, area, surface area, and volume.

	Know the formulas for the area and circumference of a circle and use them to solve problems (7.G.4)	38
	Use facts about supplementary, complementary, vertical, and adjacent angles in multi-step problems to write and solve simple equations for unknown angles in a figure (7.G.5)	13
		8
	Solve real-world and mathematical problems involving area, volume, and surface area of 2 and 3 dimensional objects (7.G.6)	20
		27, 39

Understand congruence and similarity using physical models, transparencies, or geometry software.

	Understand that a two-dimensional figure is congruent to another by using rotations, reflections, and translations (8.G.2)	7
		4, 9
	Understand that a two-dimensional figure is similar to another by using rotations, reflections, translations, and dilations (8.G.4)	10
	Use informal arguments to establish facts about the angle sum and exterior angle of triangles (8.G.5)	

Understand and apply Pythagorean Theorem.

	Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in 2 and 3 dimensions (8.G.7)	27
		36
	Apply the Pythagorean Theorem to find the distance between two points in a coordinate system (8.G.8)	**29**

Statistics and Probability

Summarize and describe distributions.

	Summarize numerical data sets in relation to their context (6.SP.5)*	24, 25
		19, 25, 30

Use random sampling to draw inferences about a population.

	Understand that statistics can be used to gain information about a population by examining a sample of the population (7.SP.1)	25
	Use data from a random sample to draw inferences about a population with an unknown characteristic of interest (7.SP.2)	25, 29, 32

Draw informal comparative inferences about two populations.

	Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between measures of center (7.SP.3)	
	Use measures of center and measures of variability from numerical data from random samples to draw informal comparative inferences about two populations (7.SP.4)	

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Investigate chance processes and develop, use, and evaluate probability models.	
Understand that the probability of a chance event is a number between 0 and 1 that expresses likelihood of the event occurring. The higher the number the higher probability (7.SP.5)	26 **18**
Approximate the probability of a chance event by collecting data and predict relative frequency in the long run (7.SP.6)	12, 14 **23**
Develop a probability model and use it to find probabilities of events (7.SP.7)*	**34**
Understand the probability of a compound event is the fraction of outcomes in a sample space (7.SP.8a)	**32**
Represent sample spaces for compound events using various methods (lists, tables, and trees) (7.SP.8b)	21
Investigate patterns of association in bivariate data	
Construct and interpret scatter plots for bivariate measurement data and describe patterns (8.SP.1)	**11, 12, 26**
Know that straight lines are used to model relationships between two quantitative variables (8.SP.2)	1
Use equations of linear models to solve problems in bivariate data, interpret slope and intercept (8.SP.3)	
Show patterns of association using two-way frequency tables (8.SP.4)	