KAP Predictive Interim Cluster Map

- The predictive interim assessments provide an estimate of a student's future performance on Kansas summative assessments. The assessments also allow educators to evaluate students' knowledge and skills in a subject and are designed to inform decisions both at the classroom level and beyond (e.g., at the school or district level). To keep the assessment length short, the total number of items that students respond to are limited. The predictive interim assessments do not support any inferences about performance at standard level because measurement best practice would require substantially more items per standard in order to provide an accurate measure of whether the student knows the content of each standard. However, the predictive interim assessments support the inferences made about clusters at the classroom level and beyond because student responses are aggregated and thus more reliable.

- The cluster map resource documents include the clusters embedded in the 2017 Kansas standards and a table mapping each item on the predictive interim assessments to the cluster and item description. In a cluster map resource document, there are two parts: a cluster key table and a cluster mapping table. The cluster key table includes the cluster code and cluster description as well as its domain, and the cluster mapping table links each item with the cluster it is measuring.

- Teachers could use this resource to identify items measuring the same cluster or domain. Combining this resource with information from the school or district report, teacher also could make inferences about school or district performances on clusters or domains. If the whole school performed better than the state average on the majority of items measuring the same cluster or domain, then the teacher could infer that the students in the school likely understood the knowledge and skills of this cluster or domain. If the whole school performed worse than the state average on the majority of items measuring the same cluster or domain, then the teacher might want to spend more instruction time on this cluster or domain.

- Although there are more items measuring one cluster or domain than one standard, the predictive interim assessment still do not support any inferences made about clusters or domains at student level because the number of items per cluster or domain is still not large enough to provide an accurate measure of whether the student understands the content of each cluster or domain.

KAP Predictive Interim Cluster Map

Mathematics Key

Domain	Cluster	Description
Ratios and Proportional Relationships	7.RP.A	Analyze proportional relationships and use them to solve real-world and mathematical problems.
The Number System	7.NS.A	Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.
Expressions and Equations	7.EE.A	Use properties of operations to generate equivalent expressions.
	7.EE.B	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.
Geometry	7.G.A	Draw, construct, and describe geometrical figures and describe the relationships between them.
	7.G.B	Solve real-life and mathematical problems involving area, surface area, and volume.
Statistics and Probability	7.SP.A	Use random sampling to draw inferences about a population.
	7.SP.B	Draw informal comparative inferences about two populations.
	7.SP.C	Investigate chance processes and develop, use, and evaluate probability models.
Strategic Thinking and Reasoning	7.STAR.PSM	Problem solving and modeling.
	7.STAR.CR	Communicating Reasoning.

Grade 7 Mathematics: Fall

Item Position	Cluster	Item Description
1	7.NS.A	Describe the result of adding positive and negative integers
2	7.NS.A	Compute the result of adding positive and negative integers
3	7.NS.A	Compute the difference between two decimals
4	7.NS.A	Identify a number line that models the addition of two fractions
5	7.NS.A	Identify the situation that is represented by the sum of two fractions
6	7.NS.A	Identify an equivalent expression in which two fractions are added
7	7.RP.A	Identify the graph of a proportional relationship
8	7.RP.A	Identify the table of a proportional relationship
9	7.RP.A	Interpret a point on a graph in terms of a context
10	7.RP.A	Interpret a point on a graph in terms of a context
11	7.EE.A	Use factoring to determine an equivalent expression
12	7.EE.A	Determine the missing factor when given an expression and one factor
13	7.EE.A	Determine the unknown values that make two expressions equivalent
14	7.EE.B	Solve a word problem involving rational numbers
15	7.EE.B	Use unit rate and discount to determine total cost
16	7.EE.B	Use unit rate and tax rate to determine total cost
17	7.EE.B	Represent a situation with an inequality in one variable
18	7.EE.B	Determine the amount of change due, given the cost and discount of an item
19	7.SP.C	Find the probability of a simple event
20	7.STAR.PSM	Solve a word problem involving inequality in one variable
21	7.STAR.CR	Interpret the parts of an inequality representing a situation
22	7.STAR.PSM	Solve a word problem by finding a rate of a whole number and a fraction

Be cautious about any inferences made about a cluster measured by less than 4 items. In this case, inferences are better suited at the domain level.

Grade 7 Mathematics: Winter

Item Position	Cluster	Item Description
1	7.NS.A	Describe the result of adding negative rational numbers
2	7.NS.A	Identify an equivalent expression involving subtraction of fractions
3	7.RP.A	Determine whether two quantities in a table are in a proportional relationship
4	7.RP.A	Determine whether two quantities in a graph are in a proportional relationship
5	7.RP.A	Determine whether two quantities in a table are in a proportional relationship
6	7.EE.A	Determine the unknown value that makes two expressions equivalent
7	7.EE.A	Use factoring to determine an equivalent expression
8	7.EE.B	Represent a situation with an inequality in one variable
9	7.EE.B	Solve a word problem involving rational numbers
10	7.G.A	Determine the two-dimensional figure created on a plane when a solid is sliced
11	7.SP.A	Determine a representative sample given a situation
12	7.SP.A	Determine a representative sample given a situation
13	7.SP.B	Use data presented in two dot plots to compare measures of center
14	7.SP.B	Use data presented in two bar graphs to compare measures of center
15	7.SP.C	Find the probability of a simple event
16	7.SP.C	Find the probability of a simple event
17	7.STAR.PSM	Find the area of a triangle in a composite shape
18	7.STAR.CR	Solve a word problem involving percentages and probability
19	7.STAR.PSM	Solve a multistep word problem involving percentages
20	7.STAR.CR	Determine correct reasoning about the graphs of proportional relationships
21	7.STAR.PSM	Solve a multistep word problem involving percentages and comparing total cost
22	7.STAR.PSM	Solve a multistep word problem involving percentages
23	7.STAR.CR	Compare expressions involving rational numbers and absolute value

Be cautious about any inferences made about a cluster measured by less than 4 items. In this case, inferences are better suited at the domain level.

Grade 7 Mathematics: Spring

Item Position	Cluster	Item Description
1	7.NS.A	Identify an equivalent expression involving addition and subtraction of fractions
2	7.RP.A	Determine whether two quantities in a graph are in a proportional relationship
3	7.RP.A	Determine whether two quantities in a table are in a proportional relationship
4	7.EE.A	Use factoring to determine an equivalent expression
5	7.EE.A	Determine the unknown values that make two expressions equivalent
6	7.EE.B	Represent a situation with an equation in one variable
7	7.EE.B	Solve a multistep word problem involving rational numbers
8	7.G.A	Determine the two-dimensional figure created on a plane when a solid is sliced
9	7.G.A	Determine the two-dimensional figure created on a plane when a solid is sliced
10	7.SP.A	Use data from a random sample to draw inferences about a population
11	7.SP.A	Use data from a random sample to draw inferences about a population
12	7.SP.A	Determine a representative sample given a situation
13	7.SP.B	Use data presented in two tables to compare measures of center
14	7.SP.C	Find the probability of a compound event
15	7.SP.C	Solve a word problem involving angle measures and probability
16	7.STAR.CR	Use data presented in a graph to compare measures of center
17	7.STAR.CR	Compare features of two circles given a ratio of their radii
18	7.STAR.CR	Compare expressions involving rational numbers and absolute value
19	7.STAR.PSM	Solve a multistep word problem involving probability
20	7.STAR.PSM	Solve a multistep word problem using rational numbers
21	7.STAR.PSM	Determine the original cost given discounted price and the tax rate
22	7.STAR.PSM	Find the area of a composite shape
23	7.STAR.PSM	Solve a multistep word problem involving percentages and comparing total cost

Be cautious about any inferences made about a cluster measured by less than 4 items. In this case, inferences are better suited at the domain level.