



## 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

## Grade 8 Mathematics Key

Domain	Cluster	Description
The Number System	8.NS.A	Know that there are numbers that are not rational, and approximate them by rational numbers.
Expressions and Equations	8.EE.A	Work with radicals and integer exponents.
	8.EE.B	Understand the connections between proportional relationships, lines, and linear equations.
	8.EE.C	Analyze and solve linear equations and inequalities.
Functions	8.F.A	Define, evaluate, and compare functions.
	8.F.B	Use functions to model relationships between quantities.
Geometry	8.G.A	Geometric measurement: understand concepts of angle and measure angles.
	8.G.B	Understand and apply the Pythagorean Theorem.
	8.G.C	Solve real-world and mathematical problems involving measurement.
Statistics and Probability	8.SP.A	Investigate patterns of association in bivariate data.
Strategic Thinking and Reasoning	8.STAR.PSM	Problem solving and modeling.
	8.STAR.CR	Communicating Reasoning.

## Grade 8 Mathematics: Fall

Item Position	Cluster	Item Description
1	8.NS.A	Find the approximate location of an irrational number on a number line
2	8.NS.A	Find the approximate location of an irrational number on a number line
3	8.NS.A	Identify numbers as rational or irrational
4	8.NS.A	Find the approximate value of an irrational number
5	8.EE.A	Find the cube root of a perfect cube
6	8.EE.B	Identify the graph of a situation
7	8.EE.B	Identify the graph of a situation
8	8.EE.B	Compare rates in two situations: one modeled in a table and one modeled in a graph
9	8.EE.C	Solve a two-step equation in one variable
10	8.EE.C	Solve a multistep equation in one variable
11	8.EE.C	Solve a multistep equation in one variable
12	8.F.B	Use a description of a situation and a graph to determine rate
13	8.F.B	Identify the graph of a function representing a situation
14	8.F.B	Identify whether a graphed function is linear/nonlinear and increasing/decreasing
15	8.F.B	Identify whether a graphed function is linear/nonlinear and increasing/decreasing
16	8.G.B	Use the Pythagorean theorem to find the length of a hypotenuse
17	8.STAR.CR	Interpret parts of an equation, and relate values to a situation

*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.*

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## Grade 8 Mathematics Key

Domain	Cluster	Description
The Number System	8.NS.A	Know that there are numbers that are not rational, and approximate them by rational numbers.
Expressions and Equations	8.EE.A	Work with radicals and integer exponents.
	8.EE.B	Understand the connections between proportional relationships, lines, and linear equations.
	8.EE.C	Analyze and solve linear equations and inequalities.
Functions	8.F.A	Define, evaluate, and compare functions.
	8.F.B	Use functions to model relationships between quantities.
Geometry	8.G.A	Geometric measurement: understand concepts of angle and measure angles.
	8.G.B	Understand and apply the Pythagorean Theorem.
	8.G.C	Solve real-world and mathematical problems involving measurement.
Statistics and Probability	8.SP.A	Investigate patterns of association in bivariate data.
Strategic Thinking and Reasoning	8.STAR.PSM	Problem solving and modeling.
	8.STAR.CR	Communicating Reasoning.

## Grade 8 Mathematics: Winter

Item Position	Cluster	Item Description
1	8.NS.A	Identify numbers as rational or irrational
2	8.NS.A	Express a repeating decimal as a fraction
3	8.EE.B	Compare rates in two situations: one modeled in a table and one modeled in a graph
4	8.EE.B	Compare rates in two situations: one modeled in an equation and one modeled in a graph
5	8.EE.B	Compare rates in two situations: one modeled in an equation and one modeled in a graph
6	8.EE.B	Compare rates in two situations: one from a description and one modeled in a graph
7	8.EE.C	Solve a multistep equation in one variable
8	8.EE.C	Solve a two-step equation in one variable
9	8.EE.C	Solve a multistep equation in one variable
10	8.F.A	Compare functions: one modeled in an equation and one modeled in a graph
11	8.F.A	Compare functions: one modeled in a graph and one modeled in a table
12	8.F.A	Compare functions: one modeled in an equation and one modeled in a graph
13	8.F.B	Write a linear function based on the description of a situation
14	8.F.B	Write a linear function given two solutions to the function
15	8.G.B	Use the Pythagorean Theorem to find the distance between two points on a coordinate plane
16	8.STAR.CR	Use rates modeled in two different ways to compare statements
17	8.STAR.PSM	Identify features of a linear function given two solutions

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