



Test Blueprints

AK STAR English Language Arts and Mathematics

Overview

The AK STAR test is an item-adaptive test model that extends the purpose of the assessment beyond determining end-of-grade proficiency to also include high-precision RIT scores compatible with MAP Growth. The test model has two components:

- The **Summative** component that —
 - Addresses the breadth and depth of the Alaska grade-level content standards
 - Produces a summative test score and proficiency determination
 - Satisfies the core summative test blueprint for balance of content representation
- The **Growth** component that —
 - Accesses a broader item pool, including items from MAP Growth and items assessing above- or below-grade standards
 - Works together with the items from the core summative component to yield scores on the MAP Growth RIT scale, including a RIT score specific to current MAP Growth Instructional Areas

Figure 1 illustrates how these two components work together to produce both a single summative test score and a suite of informative sub-scores by Instructional Area.

Figure 1. Items contributing to Summative and Growth scores

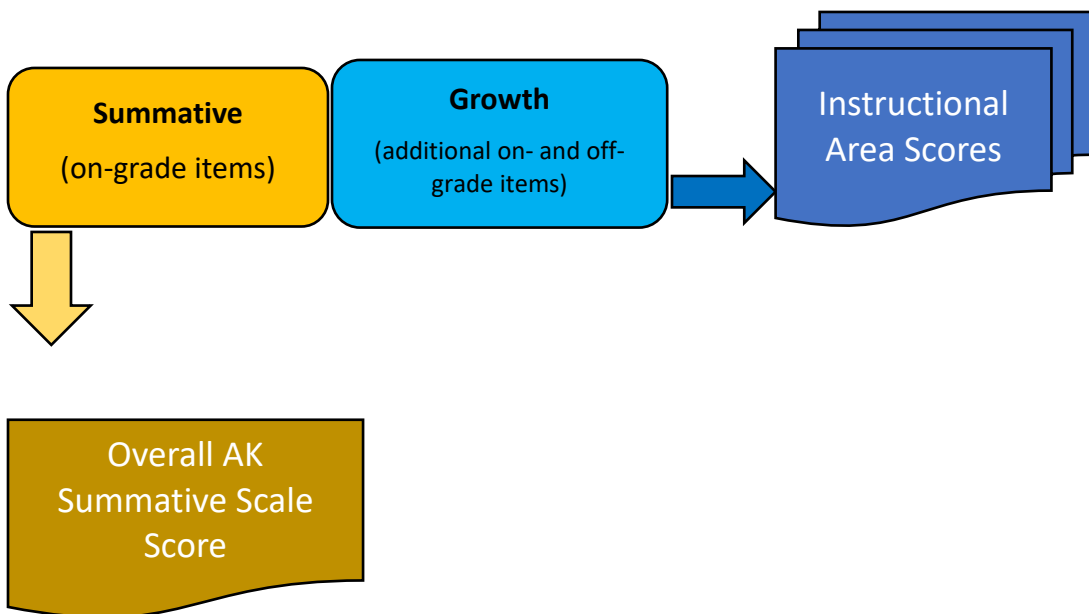
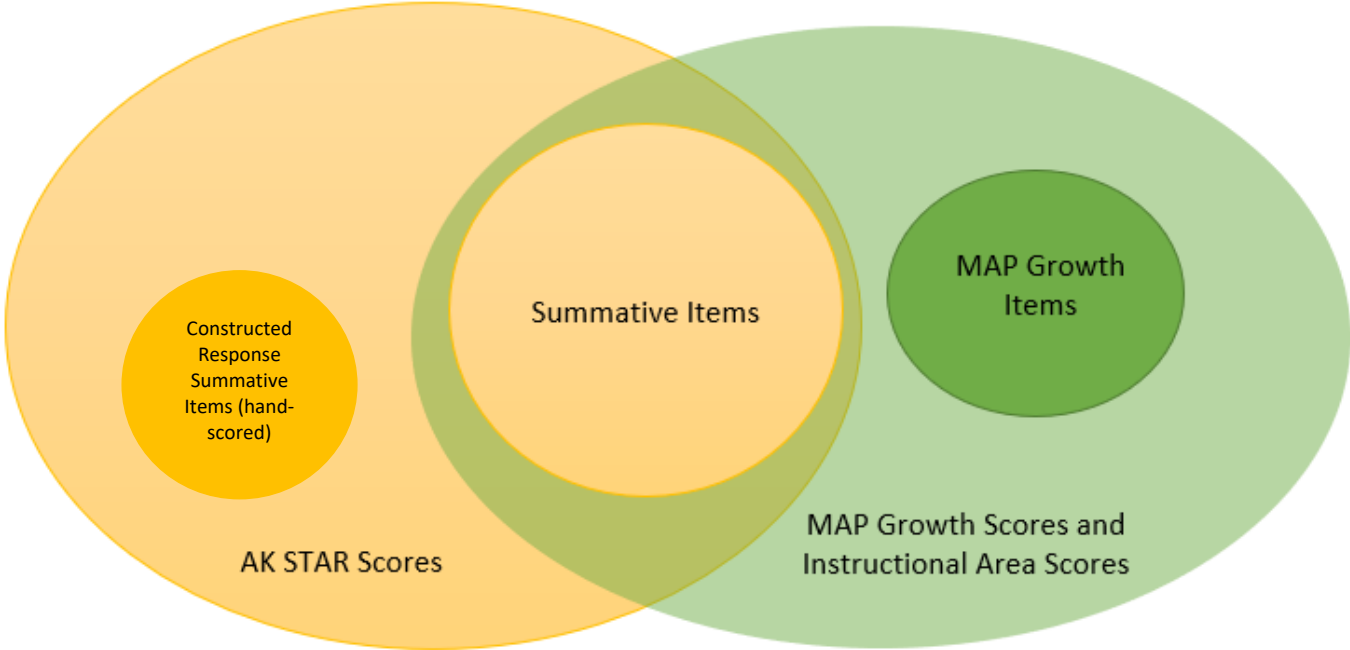


Figure 2 illustrates how AK STAR uses Summative Items and MAP Growth Items to produce a single summative test score and a suite of interim information by instructional areas. This Venn diagram can be helpful to use when interpreting the blueprints below.

Figure 2. Items Contributing to Summative, MAP Growth, and Instructional Area Scores

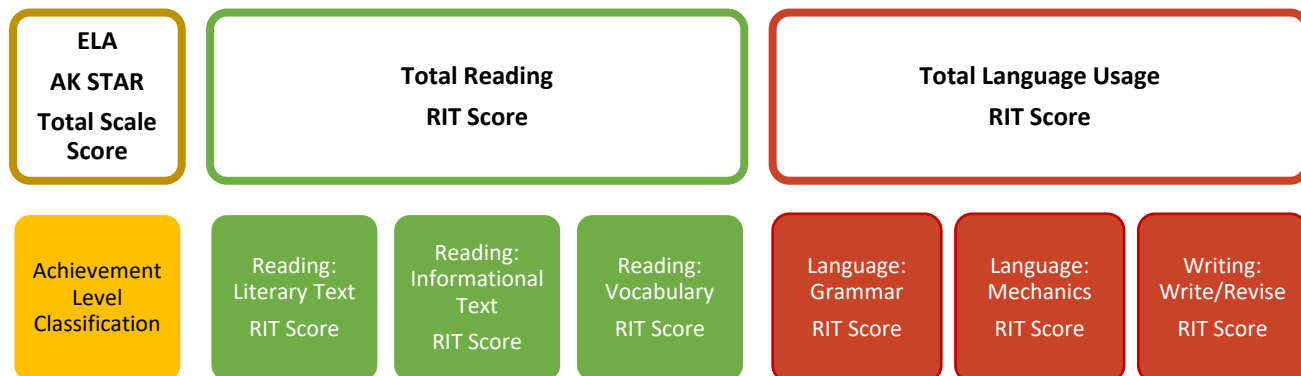


The AK STAR assessment is designed as an item-level adaptive test. Adaptive tests and their blueprints can typically be less prescriptive about exact item and point counts because the goal—unlike a linear assessment—is to use the adaptive nature to determine the test scores with the greatest precision and also the greatest efficiency possible. Therefore, adaptive test blueprints typically state their targets in terms of percentages and ranges to allow the adaptive engine to tailor the test to the individual student while still fulfilling the overall claims and required scores for all students equally.

English Language Arts

The English language arts (ELA) test design presented in Figure 3 shows the following reporting categories. These scores are reported at the individual student level and aggregated into traditional reporting groups (e.g., grade, school, district).

Figure 3. English Language Arts Score Reporting Categories



The ELA AK STAR score reports include two overall reporting elements used for state and federal accountability purposes: 1) ELA AK STAR Total Scale Score, and 2) Achievement Level Classification. The Summative component of the test is used to generate the accountability scores and classifications.

The test design also produces two additional domain scores on the same score scales that MAP Growth¹ uses: 1) Total Reading RIT Score, and 2) Total Language Usage RIT Score. These scores—and their related sub-scores—are derived from items in the Summative component as well as the additional items from the Growth component in these two domains. These scores—and their related sub-scores—are intended to support classroom instruction and do not contribute to state or federal accountability requirements. The four overall domain scores or classifications are listed in Table 1.

Table 1. English Language Arts Domain Scores and Classifications

Total Scores	Description
ELA AK STAR Total Scale Score	Summary scale score generated from all eligible Summative items
Achievement Level Classification	Classification of student performance: Needs Support, Approaching Proficient, Proficient, and Advanced
Total Reading RIT Score	Summary scale score generated from all contributing Growth reading items (including Summative items that also contribute to this score)
Total Language Usage RIT Score	Summary scale score generated from all contributing Growth language usage items (including Summative items that also contribute to this score)

¹ ELA AK STAR aligns with MAP Growth Language Usage 2-12 and with MAP Growth Reading 2-5 (grades 3-5) or MAP Growth Reading 6+ (grades 6-9).

The sub-scores in the English Language Arts test design are compatible with the MAP Growth Instructional Areas. In the AK STAR, an Instructional Area RIT score is generated in the sub-score instructional areas listed in Table 2 and Table 3 for grades 3–9.

Table 2. Reading Instructional Areas

Reading	
Literary Text	<ul style="list-style-type: none"> Analyze Theme and Literary Elements; Summarize Analyze Point of View, Features, and Structure
Informational Text	<ul style="list-style-type: none"> Analyze Central Idea, Concepts, and Events; Summarize Analyze Point of View, Purpose, Features, and Structure
Vocabulary	<ul style="list-style-type: none"> Vocabulary

Table 3. Language Usage Instructional Areas

Language Usage	
Language: Understand, Edit for Grammar, Usage	<ul style="list-style-type: none"> Parts of Speech Phrases, Clauses, Agreement, Sentences
Language: Understand, Edit Mechanics	<ul style="list-style-type: none"> Capitalization Punctuation Spelling
Writing: Plan, Organize, Develop, Revise, Research	<ul style="list-style-type: none"> Plan, Organize; Create Cohesion, Use Transitions Provide Support; Develop Topics; Conduct Research Establish and Maintain Style; Use Precise Language Purpose and Audience

All items in the Summative component of the ELA AK STAR are based on a written stimulus or stimuli. Each ELA AK STAR test will include one Literary Pair with questions about two literary reading passages and a short constructed-response (CR) item assessing writing; one Informational Single with questions about an informational reading passage; one Research Pair with questions about paired informational reading passages; and between 3 and 5 Simulated Student Writing sets assessing language and writing skills in the context of an authentic student writing draft.

The test blueprints that follow describe the content assessed in the Summative component, including the number of items contributing to the ELA AK STAR Total Scale Score, as well as the additional items contributing to the Total and Instructional Area RIT scores in the Growth component. The items in the Summative component are multiple-choice and technology-enhanced items, each worth 1 or 2 points, and the short constructed-response item is worth up to 3 points.

The alignment of both components is illustrated in **Figure 4**. The left side of each test blueprint shows the content assessed in the Summative component, including the target number of items per strand and the range of possible points, which would depend on the adaptive selection of 1- and 2-point items and the 3-point CR task in Writing. The right side of each test blueprint shows the additional Growth items that contribute to the Instructional Area RIT scores. In cases where no additional Growth items are needed, as is the case with Writing, the target additional item count is presented as “N/A.”

Below the Summative Component and Growth Component you can see a breakdown of overall item counts for summative component, growth component, field test items and overall item count.

Figure 4. English Language Arts Test Blueprint

Grade 4 ELA	Summative Scale Score				Additional Growth Items for Instructional Areas			Guideline for Overall RIT Score Items		Total AK STAR Points	
	Assessed Content Strands	Target Item Count	Summative Points per Strand	Assessed AK Standards	Instructional Areas	Target Item Count	Aligned AK Standards	Target Item Count per IA	Target Range Points per IA		
								Target Item Count per IA	Target Range Points per IA		
	Reading Literature	8	8-10	RL.4.1 - RL.4.7; RL.4.9	LITERARY TEXT	3	RL.2.3.5,6,7 RL.3.2.3,5,6,7 RL.3.3.5,6,7 RL.3.4.5,6,7,9 RL.4.2.3,7,9 RL.5.2.3,5,6,7 RL.6.2.3,5,6,9 RL.7.2.3,5,6,9 RL.8.2.3,5,6	11	11-13		
	Reading Informational Text	5	8-10	RI.4.1 - RI.4.9	INFORMATIONAL TEXT	3	RI.3.5.6,7,9 RI.3.5.6,7,8,9 RI.3.5.6,7,8 RI.3.5.6,7,8,9 RI.3.5.6,7,8,9 RI.3.5.6,7,8,9 RI.3.5.6,7,8,9 RI.3.5.6,7,8,9 RI.3.5.6,7,8,9 RI.3.5.6,7,8,9	11	11-16		
	Vocabulary	5	8-10	L.4.1 - L.4.6	VOCABULARY	6	L.4.3-6; RL.4.6; RI.4.4 L.5.4-6; RL.5.4; RI.5.4 L.6.4-6; RL.6.4; RI.6.4 L.7.4-6; RL.7.4; RI.7.4 L.8.4-6; RL.8.4; RI.8.4	11	11		
	Language	8	8-9	L.4.1 - L.4.3	LANGUAGE: GRAMMAR	5	L.4.1, L.3.1, L.2.1 L.3.1, L.4.1, L.5.1 L.6.1, L.7.1, L.8.1 L.9-10.1, L.11, L.12.1	9	9		
					LANGUAGE: MECHANICS	5	L.4.2, L.3.2, L.2.2 L.3.2, L.4.2, L.5.2 L.6.2, L.7.2, L.8.2 L.9-10.2, L.11, L.12.2	9	9		
	Writing	9 (1 Constructed Response)	13	W.4.1 - W.4.9	WRITING: WRITE/REVISE	1	W.4.1-4 W.1.1-4 W.2.1-4; L.2.1 W.3.1-4; L.3.1 W.4.1-4; L.4.1 W.5.1-4; L.5.1 W.6.1-4; L.6.1 W.7.1-4; L.7.1 W.8.1-4; L.8.1 W.9-10.1-4; L.9-10.1 W.11-12.1-4; L.11, L.12.1	9	9-11		
	Item Count Contributing to AK STAR Scale Score	38 + 1 Constructed Response			Target Additional Item Count Contributing to Growth	22		Field Test Items	5		
	Overall Item Count										
	66										

Figure 5 below displays the number of ELA total items for each grade level.

Figure 5. ELA Total Number of Items

Grade Level	ELA Total Items
3	63
4	66
5	69
6	69
7	69
8	69
9	70

Grade
3
ELA

Summative Scale Score				Additional Growth Items for Instructional Areas			Guideline for Overall RIT Score Items ²	Total AK STAR Points
Assessed Content Strands	Target Item Count	Summative Points per Strand	Assessed AK Standards	Instructional Areas	Target Item Count	Aligned AK Standards	Target Item Count per IA ³	Target Range Points per IA
Reading Literature	8	9-10	RL.3.1 - RL.3.7; RL.3.9	LITERARY TEXT	3	RL.K.2,3,5,6,7 RL.1.2,3,5,6,7 RL.2.2,3,5,6,7 RL.3.2,3,5,6,7,9 RL.4.2,3,6,7,9 RL.5.2,3,5,6,7 RL.6.2,3,5,6,9 RL.7.2,3,5,6,9 RL.8.2,3,5,6	11	11-12
Reading Informational Text	8	9-11	RI.3.1 - RI.3.9	INFORMATIONAL TEXT	3	RI.K.3,5,6,7,8 RI.1.2,3,5,6,7,8,9 RI.2.2,3,5,6,7,8 RI.3.2,3,5,6,7,8 RI.4.2,3,5,6,7,8,9 RI.5.2,3,5,6,7,8,9 RI.6.2,3,5,6,7,8 RI.7.2,3,5,6,8,9 RI.8.2,3,5,6,7,8	11	11-14
Vocabulary	5	5-7	L.3.4 - L.3.6	VOCABULARY	6	L.K.4-6; RL.K.4; RI.K.4 L.1.4-6; RL.1.4; RI.1.4 L.2.4-6; RL.2.4; RI.2.4 L.3.4-6; RL.3.4; RI.3.4 L.4.4-6; RL.4.4; RI.4.4 L.5.4-6; RL.5.4; RI.5.4 L.6.4-6; RL.6.4; RI.6.4 L.7.4-6; RL.7.4; RI.7.4 L.8.4-6; RL.8.4; RI.8.4	11	11-12
Language	8	8-9	L.3.1 - L.3.3	LANGUAGE: GRAMMAR	4	L.K.1, L.1.1, L.2.1 L.3.1, L.4.1, L.5.1 L.6.1, L.7.1, L.8.1 L.9-10.1, L.11-12.1	8	8
				LANGUAGE: MECHANICS	4	L.K.2, L.1.2, L.2.2 L.3.2, L.4.2, L.5.2 L.6.2, L.7.2, L.8.2 L.9-10.2, L.11-12.2	8	8-9
Writing	9 (1 Hand-Scored Constructed Response)	12-13	W.3.1 - W.3.8	WRITING: WRITE/REVISE	N/A	W.K.1-8 W.1.1-8 W.2.1-8; L.2.3 W.3.1-8; L.3.3 W.4.1-8; L.4.3 W.5.1-8; L.5.3 W.6.1-8; L.6.3 W.7.1-8; L.7.3 W.8.1-8; L.8.3 W.9-10.1-8; L.9-10.3 W.11-12.1-8; L.11-12.3	8	8-9
Item Count Contributing to AK STAR Scale Score	37 + 1 Constructed Response			Target Additional Item Count Contributing to Growth	20		Field Test Items	5
Overall Item Count								
63								

² Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

³ Figure 2 can be useful in understanding how AK STAR uses Summative Items and MAP Growth Items to produce a single summative test score and a suite of diagnostic scores by instructional areas.

Summative Scale Score			
Assessed Content Strands	Target Item Count	Summative Points per Strand	Assessed AK Standards
Reading Literature	8	8-10	RL.4.1 - RL.4.7; RL.4.9
Reading Informational Text	9	12-15	RI.4.1 - RI.4.9
Vocabulary	5	5	L.4.4 - L.4.6
Language	8	8-9	L.4.1 - L.4.3
Writing	9 (1 Constructed Response)	13	W.4.1 - W.4.9

Additional Growth Items for Instructional Areas		
Instructional Areas	Target Item Count	Aligned AK Standards
LITERARY TEXT	3	RL.K.2,3,5,6,7 RL.1.2,3,5,6,7 RL.2.2,3,5,6,7 RL.3.2,3,5,6,7,9 RL.4.2,3,6,7,9 RL.5.2,3,5,6,7 RL.6.2,3,5,6,9 RL.7.2,3,5,6,9 RL.8.2,3,5,6
INFORMATIONAL TEXT	2	RI.K.3,5,6,7,8 RI.1.2,3,5,6,7,8,9 RI.2.2,3,5,6,7,8 RI.3.2,3,5,6,7,8 RI.4.2,3,5,6,7,8,9 RI.5.2,3,5,6,7,8,9 RI.6.2,3,5,6,7,8 RI.7.2,3,5,6,8,9 RI.8.2,3,5,6,7,8
VOCABULARY	6	L.K.4-6; RL.K.4; RI.K.4 L.1.4-6; RL.1.4; RI.1.4 L.2.4-6; RL.2.4; RI.2.4 L.3.4-6; RL.3.4; RI.3.4 L.4.4-6; RL.4.4; RI.4.4 L.5.4-6; RL.5.4; RI.5.4 L.6.4-6; RL.6.4; RI.6.4 L.7.4-6; RL.7.4; RI.7.4 L.8.4-6; RL.8.4; RI.8.4
LANGUAGE: GRAMMAR	5	L.K.1, L.1.1, L.2.1 L.3.1, L.4.1, L.5.1 L.6.1, L.7.1, L.8.1 L.9-10.1, L.11-12.1
LANGUAGE: MECHANICS	5	L.K.2, L.1.2, L.2.2 L.3.2, L.4.2, L.5.2 L.6.2, L.7.2, L.8.2 L.9-10.2, L.11-12.2
WRITING: WRITE/REVISE	1	W.K.1-8 W.1.1-8 W.2.1-8; L.2.3 W.3.1-8; L.3.3 W.4.1-8; L.4.3 W.5.1-8; L.5.3 W.6.1-8; L.6.3 W.7.1-8; L.7.3 W.8.1-8; L.8.3 W.9-10.1-8; L.9-10.3 W.11-12.1-8; L.11-12.3

Guideline for Overall RIT Score Items ⁴	Total AK STAR Points
Target Item Count per IA ⁵	Target Range Points per IA
11	11-13
11	11-16
11	11
9	9
9	9
9	9-11

Item Count Contributing to AK STAR Scale Score	38 + 1 Constructed Response
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Target Additional Item Count Contributing to Growth	22
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Field Test Items	5
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Overall Item Count

66

⁴ Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

⁵ **Figure 2** can be useful in understanding how AK STAR uses Summative Items and MAP Growth Items to produce a single summative test score and a suite of interim information by instructional areas.

Summative Scale Score				Additional Growth Items for Instructional Areas			Guideline for Overall RIT Score Items ⁶	Total AK STAR Points
Assessed Content Strands	Target Item Count	Summative Points per Strand	Assessed AK Standards	Instructional Areas	Target Item Count	Aligned AK Standards	Target Item Count per IA ⁷	Target Range Points per IA
Reading Literature	8	9-10	RL.5.1 - RL.5.7; RL.5.9	LITERARY TEXT	4	RL.K.2,3,5,6,7 RL.1.2,3,5,6,7 RL.2.2,3,5,6,7 RL.3.2,3,5,6,7,9 RL.4.2,3,6,7,9 RL.5.2,3,5,6,7 RL.6.2,3,5,6,9 RL.7.2,3,5,6,9 RL.8.2,3,5,6	12	12-14
Reading Informational Text	11	12-16	RI.5.1 - RI.5.9	INFORMATIONAL TEXT	1	RI.K.3,5,6,7,8 RI.1.2,3,5,6,7,8,9 RI.2.2,3,5,6,7,8 RI.3.2,3,5,6,7,8 RI.4.2,3,5,6,7,8,9 RI.5.2,3,5,6,7,8,9 RI.6.2,3,5,6,7,8 RI.7.2,3,5,6,8,9 RI.8.2,3,5,6,7,8	12	12-15
Vocabulary	5	5-8	L.5.4 - L.5.6	VOCABULARY	7	L.K.4-6; RL.K.4; RI.K.4 L.1.4-6; RL.1.4; RI.1.4 L.2.4-6; RL.2.4; RI.2.4 L.3.4-6; RL.3.4; RI.3.4 L.4.4-6; RL.4.4; RI.4.4 L.5.4-6; RL.5.4; RI.5.4 L.6.4-6; RL.6.4; RI.6.4 L.7.4-6; RL.7.4; RI.7.4 L.8.4-6; RL.8.4; RI.8.4	12	12
Language	8	9-11	L.5.1 - L.5.3	LANGUAGE: GRAMMAR	5	L.K.1, L.1.1, L.2.1 L.3.1, L.4.1, L.5.1 L.6.1, L.7.1, L.8.1 L.9-10.1, L.11-12.1	9	9
				LANGUAGE: MECHANICS	5	L.K.2, L.1.2, L.2.2 L.3.2, L.4.2, L.5.2 L.6.2, L.7.2, L.8.2 L.9-10.2, L.11-12.2	9	9-11
Writing	9 (1 Constructed Response)	11-12	W.5.1 - W.5.9	WRITING: WRITE/REVISE	1	W.K.1-8 W.1.1-8 W.2.1-8; L.2.3 W.3.1-8; L.3.3 W.4.1-8; L.4.3 W.5.1-8; L.5.3 W.6.1-8; L.6.3 W.7.1-8; L.7.3 W.8.1-8; L.8.3 W.9-10.1-8; L.9-10.3 W.11-12.1-8; L.11-12.3	9	9-10
Item Count Contributing to AK STAR Scale Score	40 + 1 Constructed Response			Target Additional Item Count Contributing to Growth	23		Field Test Items	5
Overall Item Count								
69								

⁶ Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

⁷ **Figure 2** can be useful in understanding how AK STAR uses Summative Items and MAP Growth Items to produce a single summative test score and a suite of interim information by instructional areas.

Grade
6
ELA

Summative Scale Score				Additional Growth Items for Instructional Areas			Guideline for Overall RIT Score Items ⁸	Total AK STAR Points
Assessed Content Strands	Target Item Count	Summative Points per Strand	Assessed AK Standards	Instructional Areas	Target Item Count	Aligned AK Standards	Target Item Count per IA ⁹	Target Range Points per IA
Reading Literature	9-10	13-14	RL.6.1 - RL.6.7; RL.6.9	LITERARY TEXT	2-3	RL.3.2,3,5,6,7,9 RL.4.2,3,6,7,9 RL.5.2,3,5,6,7 RL.6.2,3,5,6,9 RL.7.2,3,5,6,9 RL.8.2,3,5,6 RL.9-10.2,3,5,6,9 RL.11-12.2,3,5,6,9	12	12-16
Reading Informational Text	10-12	10-14	RI.6.1 - RI.6.9	INFORMATIONAL TEXT	1-2	RI.3.2,3,5,6,7,8 RI.4.2,3,5,6,7,8,9 RI.5.2,3,5,6,7,8,9 RI.6.2,3,5,6,7,8 RI.7.2,3,5,6,8,9 RI.8.2,3,5,6,7,8 RI.9-10.2,3,5,6,8,9 RI.11-12.2,3,5,6,8,9	12	12-13
Vocabulary	4-6	5-8	L.6.4 - L.6.6	VOCABULARY	6-8	L.3.4-6; RL.3.4; RI.3.4 L.4.4-6; RL.4.4; RI.4.4 L.5.4-6; RL.5.4; RI.5.4 L.6.4-6; RL.6.4; RI.6.4 L.7.4-6; RL.7.4; RI.7.4 L.8.4-6; RL.8.4; RI.8.4 L.9-10.4-6; RL.9-10.4; RI.9-10.4 L.11-12.4-6; RL.11-12.4; RI.11-12.4	12	12
Language	7-9	7-12	L.6.1 - L.6.3	LANGUAGE: GRAMMAR	4-5	L.K.1, L.1.1, L.2.1 L.3.1, L.4.1, L.5.1 L.6.1, L.7.1, L.8.1 L.9-10.1, L.11-12.1	9	9
				LANGUAGE: MECHANICS	4-5	L.K.2, L.1.2, L.2.2 L.3.2, L.4.2, L.5.2 L.6.2, L.7.2, L.8.2 L.9-10.2, L.11-12.2	9	9-11
Writing	9 (1 Constructed Response)	11-12	W.6.1 - W.6.9	WRITING: WRITE/REVISE	1	W.K.1-8 W.1.1-8 W.2.1-8; L.2.3 W.3.1-8; L.3.3 W.4.1-8; L.4.3 W.5.1-8; L.5.3 W.6.1-8; L.6.3 W.7.1-8; L.7.3 W.8.1-8; L.8.3 W.9-10.1-8; L.9-10.3 W.11-12.1-8; L.11-12.3	9	9-10
Item Count Contributing to AK STAR Scale Score	42 + 1 Constructed Response			Target Additional Item Count Contributing to Growth	21		Field Test Items	5
Overall Item Count								
69								

⁸ Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

⁹ **Figure 2** can be useful in understanding how AK STAR uses Summative Items and MAP Growth Items to produce a single summative test score and a suite of interim information by instructional areas.

Summative Scale Score				Additional Growth Items for Instructional Areas			Guideline for Overall RIT Score Items ¹⁰	Total AK STAR Points
Assessed Content Strands	Target Item Count	Summative Points per Strand	Assessed AK Standards	Instructional Areas	Target Item Count	Aligned AK Standards	Target Item Count per IA ¹¹	Target Range Points per IA
Reading Literature	7-9	9-10	RL.7.1 - RL.7.7; RL.7.9	LITERARY TEXT	4-5	RL.3.2,3,5,6,7,9 RL.4.2,3,6,7,9 RL.5.2,3,5,6,7 RL.6.2,3,5,6,9 RL.7.2,3,5,6,9 RL.8.2,3,5,6 RL.9-10.2,3,5,6,9 RL.11-12.2,3,5,6,9	12	12-14
Reading Informational Text	10-12	11-16	RI.7.1 - RI.7.9	INFORMATIONAL TEXT	1-2	RI.3.2,3,5,6,7,8 RI.4.2,3,5,6,7,8,9 RI.5.2,3,5,6,7,8,9 RI.6.2,3,5,6,7,8 RI.7.2,3,5,6,8,9 RI.8.2,3,5,6,7,8 RI.9-10.2,3,5,6,8,9 RI.11-12.2,3,5,6,8,9	12	12-16
Vocabulary	5-6	6-7	L.7.4 - L.7.6	VOCABULARY	7-8	L.3.4-6; RL.3.4; RI.3.4 L.4.4-6; RL.4.4; RI.4.4 L.5.4-6; RL.5.4; RI.5.4 L.6.4-6; RL.6.4; RI.6.4 L.7.4-6; RL.7.4; RI.7.4 L.8.4-6; RL.8.4; RI.8.4 L.9-10.4-6; RL.9-10.4; RI.9-10.4 L.11-12.4-6; RL.11-12.4; RI.11-12.4	12	12-13
Language	8-10	10-14	L.7.1 - L.7.3	LANGUAGE: GRAMMAR	3-5	L.K.1, L.1.1, L.2.1 L.3.1, L.4.1, L.5.1 L.6.1, L.7.1, L.8.1 L.9-10.1, L.11-12.1	9	9
				LANGUAGE: MECHANICS	3-5	L.K.2, L.1.2, L.2.2 L.3.2, L.4.2, L.5.2 L.6.2, L.7.2, L.8.2 L.9-10.2, L.11-12.2	9	9-13
Writing	9-11 (1 Constructed Response)	11-14	W.7.1 - W.7.9	WRITING: WRITE/REVISE	0-1	W.K.1-8 W.1.1-8 W.2.1-8; L.2.3 W.3.1-8; L.3.3 W.4.1-8; L.4.3 W.5.1-8; L.5.3 W.6.1-8; L.6.3 W.7.1-8; L.7.3 W.8.1-8; L.8.3 W.9-10.1-8; L.9-10.3 W.11-12.1-8; L.11-12.3	9	9
Item Count Contributing to AK STAR Scale Score	42 + 1 Constructed Response			Target Additional Item Count Contributing to Growth	21		Field Test Items	5
Overall Item Count								
69								

¹⁰ Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

¹¹ Figure 2 can be useful in understanding how AK STAR uses Summative Items and MAP Growth Items to produce a single summative test score and a suite of interim information by instructional areas.

Summative Scale Score				Additional Growth Items for Instructional Areas			Guideline for Overall RIT Score Items ¹²	Total AK STAR Points
Assessed Content Strands	Target Item Count	Summative Points per Strand	Assessed AK Standards	Instructional Areas	Target Item Count	Aligned AK Standards	Target Item Count per IA ¹³	Target Range Points per IA
Reading Literature	7-9	10-14	RL.8.1 - RL.8.7; RL.8.9	LITERARY TEXT	3-5	RL.3.2,3,5,6,7,9 RL.4.2,3,6,7,9 RL.5.2,3,5,6,7 RL.6.2,3,5,6,9 RL.7.2,3,5,6,9 RL.8.2,3,5,6 RL.9-10.2,3,5,6,9 RL.11-12.2,3,5,6,9	12	12-17
Reading Informational Text	10-12	14-17	RI.8.1 - RI.8.9	INFORMATIONAL TEXT	1-2	RI.3.2,3,5,6,7,8 RI.4.2,3,5,6,7,8,9 RI.5.2,3,5,6,7,8,9 RI.6.2,3,5,6,7,8 RI.7.2,3,5,6,8,9 RI.8.2,3,5,6,7,8 RI.9-10.2,3,5,6,8,9 RI.11-12.2,3,5,6,8,9	12	12-16
Vocabulary	5	5-7	L.8.4 - L.8.6	VOCABULARY	7	L.3.4-6; RL.3.4; RI.3.4 L.4.4-6; RL.4.4; RI.4.4 L.5.4-6; RL.5.4; RI.5.4 L.6.4-6; RL.6.4; RI.6.4 L.7.4-6; RL.7.4; RI.7.4 L.8.4-6; RL.8.4; RI.8.4 L.9-10.4-6; RL.9-10.4; RI.9-10.4 L.11-12.4-6; RL.11-12.4; RI.11-12.4	12	12-13
Language	8-10	8-11	L.8.1 - L.8.3	LANGUAGE: GRAMMAR	3-5	L.K.1, L.1.1, L.2.1 L.3.1, L.4.1, L.5.1 L.6.1, L.7.1, L.8.1 L.9-10.1, L.11-12.1	9	9
				LANGUAGE: MECHANICS	3-5	L.K.2, L.1.2, L.2.2 L.3.2, L.4.2, L.5.2 L.6.2, L.7.2, L.8.2 L.9-10.2, L.11-12.2	9	9
Writing	9-11 (1 Constructed Response)	13-16	W.8.1 - W.8.9	WRITING: WRITE/REVISE	0-1	W.K.1-8 W.1.1-8 W.2.1-8; L.2.3 W.3.1-8; L.3.3 W.4.1-8; L.4.3 W.5.1-8; L.5.3 W.6.1-8; L.6.3 W.7.1-8; L.7.3 W.8.1-8; L.8.3 W.9-10.1-8; L.9-10.3 W.11-12.1-8; L.11-12.3	9	9-11
Item Count Contributing to AK STAR Scale Score	42 + 1 Constructed Response			Target Additional Item Count Contributing to Growth	21		Field Test Items	5
Overall Item Count								
69								

¹² Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

¹³ *Figure 2 can be useful in understanding how AK STAR uses Summative Items and MAP Growth Items to produce a single summative test score and a suite of interim information by instructional areas.

Summative Scale Score				Additional Growth Items for Instructional Areas			Guideline for Overall RIT Score Items ¹⁴	Total AK STAR Points
Assessed Content Strands	Target Item Count	Summative Points per Strand	Assessed AK Standards	Instructional Areas	Target Item Count	Aligned AK Standards	Target Item Count per IA ¹⁵	Target Range Points per IA
Reading Literature	6-8	8-12	RL.9-10.1 - RL.9-10.7; RL.9-10.9	LITERARY TEXT	4-6	RL.3.2,3,5,6,7,9 RL.4.2,3,6,7,9 RL.5.2,3,5,6,7 RL.6.2,3,5,6,9 RL.7.2,3,5,6,9 RL.8.2,3,5,6 RL.9-10.2,3,5,6,9 RL.11-12.2,3,5,6,9	12	12-16
Reading Informational Text	12-14	19-23	RI.9-10.1 - RI.9-10.9	INFORMATIONAL TEXT	N/A	RI.3.2,3,5,6,7,8 RI.4.2,3,5,6,7,8,9 RI.5.2,3,5,6,7,8,9 RI.6.2,3,5,6,7,8 RI.7.2,3,5,6,8,9 RI.8.2,3,5,6,7,8 RI.9-10.2,3,5,6,8,9 RI.11-12.2,3,5,6,8,9	12	12-18
Vocabulary	5	5-6	L.9-10.4 - L.9-10.6	VOCABULARY	7	L.3.4-6; RL.3.4; RI.3.4 L.4.4-6; RL.4.4; RI.4.4 L.5.4-6; RL.5.4; RI.5.4 L.6.4-6; RL.6.4; RI.6.4 L.7.4-6; RL.7.4; RI.7.4 L.8.4-6; RL.8.4; RI.8.4 L.9-10.4-6; RL.9-10.4; RI.9-10.4 L.11-12.4-6; RL.11-12.4; RI.11-12.4	12	12
Language	8-10	11-13	L.9-10.1 - L.9-10.3	LANGUAGE: GRAMMAR	4-5	L.K.1, L.1.1, L.2.1 L.3.1, L.4.1, L.5.1 L.6.1, L.7.1, L.8.1 L.9-10.1, L.11-12.1	9	9
				LANGUAGE: MECHANICS	4-5	L.K.2, L.1.2, L.2.2 L.3.2, L.4.2, L.5.2 L.6.2, L.7.2, L.8.2 L.9-10.2, L.11-12.2	9	9-10
Writing	10-11 (1 Constructed Response)	12-14	W.9-10.1 - W.9-10.9	WRITING: WRITE/REVISE	N/A	W.K.1-8 W.1.1-8 W.2.1-8; L.2.3 W.3.1-8; L.3.3 W.4.1-8; L.4.3 W.5.1-8; L.5.3 W.6.1-8; L.6.3 W.7.1-8; L.7.3 W.8.1-8; L.8.3 W.9-10.1-8; L.9-10.3 W.11-12.1-8; L.11-12.3	9	9
Item Count Contributing to AK STAR Scale Score	44 + 1 Constructed Response			Target Additional Item Count Contributing to Growth	20		Field Test Items	5
Overall Item Count								
70								

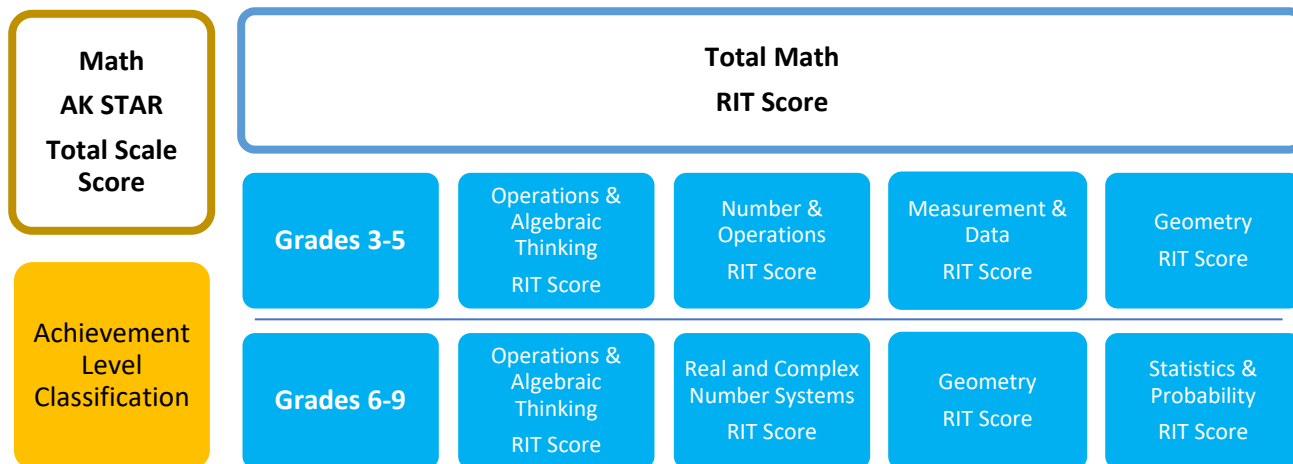
¹⁴ Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

¹⁵ Figure 2 can be useful in understanding how AK STAR uses Summative Items and MAP Growth Items to produce a single summative test score and a suite of interim information by instructional areas.

Mathematics

The Mathematics test design presented in **Figure 6** shows the following reporting categories. These scores are reported at the individual student level and aggregated into traditional reporting groups (e.g., grade, school, district). Mathematics is represented in two distinct sets of design blueprints to match the change in Instructional Areas between grades 3–5 and grades 6–9. The following design outlines this difference in the grade spans.

Figure 6. Mathematics Score Reporting Categories



The Mathematics AK STAR score reports include two overall reporting elements used for state and federal accountability purposes: 1) Math AK STAR Total Scale Score, and 2) Achievement Level Classification. The Summative component of the test is used to generate the accountability scores and classifications.

The test design also produces an additional domain score on the same score scale that MAP Growth¹⁶ uses: Total Math RIT Score. This score—and its related sub-scores—are derived from items in the Summative component as well as the additional items from the Growth component in this domain. This score—and its related sub-scores—are intended to support classroom instruction and do not contribute to state or federal accountability requirements. The three overall domain scores or classifications are listed in **Table 4**.

Table 4. Mathematics Domain Scores and Classifications

Total Scores	Description
Math AK STAR Total Scale Score	Summary scale score generated from all eligible Summative items
Achievement Level Classification	Classification of student performance: Needs Support, Approaching Proficient, Proficient, and Advanced
Total Math RIT Score	Summary scale score generated from all contributing Growth math items (including Summative items that also contribute to this score)

¹⁶ Math AK STAR aligns with MAP Growth Math 2-5 (grades 3-5) and with MAP Growth Math 6+ (grades 6-9).

The sub-scores in the Mathematics test design are compatible with the MAP Growth Instructional Areas. In the AK STAR, an Instructional Area RIT score is generated in the sub-score instructional areas listed in **Table 5** in grades 3–5 and in **Table 6** for grades 6–9.

Table 5. Mathematics Instructional Areas for Grades 3–5

Math Grades 3–5	
Operations and Algebraic Thinking	<ul style="list-style-type: none"> • Represent and Solve Problems • Analyze Patterns and Relationships
Number and Operations	<ul style="list-style-type: none"> • Understand Place Value, Counting, and Cardinality • Number and Operations in Base Ten • Number and Operations - Fractions
Measurement and Data	<ul style="list-style-type: none"> • Geometric Measurement and Problem Solving • Represent and Interpret Data
Geometry	<ul style="list-style-type: none"> • Reason with Shapes, Attributes, and Coordinate Plane

Table 6. Mathematics Instructional Areas for Grades 6–9

Math Grades 6–9	
Operations and Algebraic Thinking	<ul style="list-style-type: none"> • Expressions and Equations • Use Functions to Model Relationships
The Real and Complex Number Systems	<ul style="list-style-type: none"> • Ratios and Proportional Relationships • Perform Operations • Extend and Use Properties
Geometry	<ul style="list-style-type: none"> • Geometric Measurement and Relationships • Congruence, Similarity, Right Triangles, & Trig
Statistics and Probability	<ul style="list-style-type: none"> • Interpreting Categorical and Quantitative Data • Using Sampling and Probability to Make Decisions

Each item in the Summative component of the Math AK STAR focuses on either the content defined by the state standards or the mathematical practices of argumentation and modeling. The test blueprints shows the Argumentation and Modeling tasks as separate content categories. While Argumentation and Modeling is not its own content strand within the blueprint, the two CRs are tied to Argumentation and Modeling. These items will align to other content strands.

Each Math AK STAR test includes three embedded Argumentation tasks and three embedded Modeling tasks (four each in Grade 9), with one human-scored constructed-response task each for Argumentation and Modeling.

The test blueprints that follow describe the content assessed in the Summative component, including the number of items contributing to the Math AK STAR Total Scale Score, as well as the additional items contributing to the Total and Instructional Area RIT scores in the Growth component. The items in the Summative component are multiple-choice and technology-enhanced items, each worth 1, 2, or 3 points, and the short constructed-response items are worth up to 3 points (grades 3–5) or 4 points (grades 6–9).

The alignment of both components is illustrated in Figure 7. The left side of each test blueprint shows the content assessed in the Summative component, including the target number of items per strand and the range of possible points, which would depend on the adaptive selection of 1-, 2-, and 3-point items and the alignment of the CR tasks for Argumentation and Modeling. The right side of each test blueprint shows the additional Growth items that contribute to the Instructional Area RIT scores. In cases where no additional Growth items are needed, as is the case with Number and Operations in Grade 5, the target additional item count is presented as “N/A.” Since Geometry is not part of the Summative component in Grade 9, those item counts also say “N/A,” and all the items contributing to the Geometry Instructional Area RIT score are Growth items.

Below the Summative Component and Growth Component you can see a breakdown of overall item counts for summative component, growth component, field test items and overall item count.

Figure 7. Mathematics Test Blueprint

Grade 5 Math	Summative Scale Score				Additional Growth Items for Instructional Areas			Guideline for Overall RIT Score Items	Total AK STAR Points	
	Assessed Content Strands	Target Item Count	Summative Points per Strand	Assessed AK Standards	Instructional Areas	Target Item Count	Aligned AK Standards	Target Item Count per IA	Target Range Points per IA	
	Operations & Algebraic Thinking	3	3-5	5.OA.1 - 5.OA.3	OPERATIONS & ALGEBRAIC THINKING	12	5.OA.1-5.OA.3 5.NF.1-5.NF.7 5.NF.1-5.NF.7 5.NF.1-5.NF.7 5.NF.1-5.NF.7 5.NF.1-5.NF.7 5.NF.1-5.NF.7 5.NF.1-5.NF.7 5.NF.1-5.NF.7 5.NF.1-5.NF.7	15	15	
	Number Operations			5.NBT.1 - 5.NBT.2; 5.NF.1 - 5.NF.7	NUMBER & OPERATIONS	N/A	5.NBT.1-5.NBT.2 5.NF.1-5.NF.7 5.NF.1-5.NF.7 5.NF.1-5.NF.7 5.NF.1-5.NF.7 5.NF.1-5.NF.7 5.NF.1-5.NF.7 5.NF.1-5.NF.7 5.NF.1-5.NF.7 5.NF.1-5.NF.7	15	15-16	
	Measurement & Data			5.MD.1; 5.MD.3; 5.MD.5 - 5.MD.7	MEASUREMENT & DATA	15	5.MD.1-5.MD.7 5.MD.1-5.MD.7 5.MD.1-5.MD.7 5.MD.1-5.MD.7 5.MD.1-5.MD.7 5.MD.1-5.MD.7 5.MD.1-5.MD.7 5.MD.1-5.MD.7 5.MD.1-5.MD.7 5.MD.1-5.MD.7	15	15	
	Geometry	5	5-5	5.G.1 - 5.G.4	GEOMETRY	10	5.G.1-5.G.4 5.G.1-5.G.4 5.G.1-5.G.4 5.G.1-5.G.4 5.G.1-5.G.4 5.G.1-5.G.4 5.G.1-5.G.4 5.G.1-5.G.4 5.G.1-5.G.4 5.G.1-5.G.4	15	15	
	Argumentation & Modeling	2 Constructed Responses		These items are included in the above Content Strands						
	Item Count Contributing to AK STAR Scale Score	30 + 2 Constructed Response			Target Additional Item Count Contributing to Growth	29		Field Test Items	5	
	Overall Item Count									
	66									

Figure 8 below displays the number of Math total items for each grade level.

Figure 8. Math Total Number of Items

Grade Level	Math Total Items
3	65
4	65
5	66
6	66
7	65
8	66
9	65

Summative Scale Score			
Assessed Content Strands	Target Item Count	Summative Points per Strand	Assessed AK Standards
Operations & Algebraic Thinking	11	11-15	3.OA.1 - 3.OA.9
Number & Operations	8	8-12	3.NBT.1 - 3.NBT.3; 3.NF.1 - 3.NF.3
Measurement & Data	10	10-12	3.MD.1 - 3.MD.2; 3.MD.4 - 3.MD.5; 3.MD.7 - 3.MD.10
Geometry	3	3	3.G.1 - 3.G.2
<i>Argumentation & Modeling</i>	2 <i>Constructed Responses</i>	<i>These items are included in the above Content Strands.</i>	

Additional Growth Items for Instructional Areas		
Instructional Areas	Target Item Count	Aligned AK Standards
OPERATIONS & ALGEBRAIC THINKING	4	K.OA.1 - K.OA.5 1.OA.1 - 1.OA.6 2.OA.1 - 2.OA.4 3.OA.1 - 3.OA.9 4.OA.1 - 4.OA.5 5.OA.1 - 5.OA.3 6.EE.2 - 6.EE.9; 6.RP.3 7.EE.1 - 7.EE.4; 7.EE.1 - 7.EE.3 8.EE.5; 8.EE.7b
NUMBER & OPERATIONS	7	K.CC.1 - K.CC.7; K.NBT.1 1.NBT.1 - 1.NBT.6 2.NBT.1 - 2.NBT.8 3.NBT.1 - 3.NBT.3; 3.NF.1 - 3.NF.3 4.NBT.1 - 4.NBT.6; 4.NF.1 - 4.NF.4 5.NBT.1 - 5.NBT.7; 5.NF.1 - 5.NF.7 6.NS.1 - 6.NS.7; 6.EE.1 7.NS.1 - 7.NS.3
MEASUREMENT & DATA	5	K.MD.2 - K.MD.3 1.MD.1 - 1.MD.4 2.MD.1 - 2.MD.10 3.MD.1 - 3.MD.8 4.MD.1 - 4.MD.7 5.MD.1 - 5.MD.5 6.G.1 - 6.G.2; 6.SP.4 7.G.6; 7.SP.2
GEOMETRY	12	K.G.1 - K.G.6 1.G.1 - 1.G.3 2.G.1 - 2.G.3 3.G.1 - 3.G.2 4.G.1 - 4.G.3 5.G.1 - 5.G.4 6.G.3 - 6.G.4; 6.NS.6c 7.G.3 8.G.5

Guideline for Overall RIT Score Items ¹⁷	Total AK STAR Points
Target Item Count per IA ¹⁸	Target Range Points per IA
15	15
15	15
15	15
15	15

Item Count Contributing to AK STAR Scale Score	30 + 2 Constructed Responses	Target Additional Item Count Contributing to Growth	28	Field Test Items	5
Overall Item Count					
65					

¹⁷ Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

¹⁸ Figure 2 can be useful in understanding how AK STAR uses Summative Items and MAP Growth Items to produce a single summative test score and a suite of interim information by instructional areas.

Summative Scale Score			
Assessed Content Strands	Target Item Count	Summative Points per Strand	Assessed AK Standards
Operations & Algebraic Thinking	5	5-9	4.OA.1 - 4.OA.5
Number & Operations	14	14-18	4.NBT.1 - 4.NBT.6; 4.NF.1 - 4.NF.7
Measurement & Data	6	6-9	4.MD.1 - 4.MD.3; 4.MD.5; 4.MD.7 - 4.MD.9
Geometry	6	7-9	4.G.1 - 4.G.3
<i>Argumentation & Modeling</i>	2 <i>Constructed Responses</i>	<i>These items are included in the above Content Strands.</i>	

Additional Growth Items for Instructional Areas		
Instructional Areas	Target Item Count	Aligned AK Standards
OPERATIONS & ALGEBRAIC THINKING	10	K.OA.1 - K.OA.5 1.OA.1 - 1.OA.6 2.OA.1 - 2.OA.4 3.OA.1 - 3.OA.9 4.OA.1 - 4.OA.6 5.OA.1 - 5.OA.3 6.EE.2 - 6.EE.9; 6.RP.3 7.EE.1 - 7.EE.4; 7.EE.1 - 7.EE.3 8.EE.5; 8.EE.7b
NUMBER & OPERATIONS	1	K.CC.1 - K.CC.7; K.NBT.1 1.NBT.1 - 1.NBT.6 2.NBT.1 - 2.NBT.8 3.NBT.1 - 3.NBT.3; 3.NF.1 - 3.NF.3 4.NBT.1 - 4.NBT.6; 4.NF.1 - 4.NF.4 5.NBT.1 - 5.NBT.7; 5.NF.1 - 5.NF.7 6.NS.1 - 6.NS.7; 6.EE.1 7.NS.1 - 7.NS.3
MEASUREMENT & DATA	9	K.MD.2 - K.MD.3 1.MD.1 - 1.MD.4 2.MD.1 - 2.MD.10 3.MD.1 - 3.MD.8 4.MD.1 - 4.MD.7 5.MD.1 - 5.MD.5 6.G.1 - 6.G.2; 6.SP.4 7.G.6; 7.SP.2
GEOMETRY	9	K.G.1 - K.G.6 1.G.1 - 1.G.3 2.G.1 - 2.G.3 3.G.1 - 3.G.2 4.G.1 - 4.G.3 5.G.1 - 5.G.4 6.G.3 - 6.G.4; 6.NS.6c 7.G.3 8.G.5

Guideline for Overall RIT Score Items ¹⁹	Total AK STAR Points
Target Item Count per IA ²⁰	Target Range Points per IA
15	15
15	15-17
15	15-16
15	15-16

Item Count Contributing to AK STAR Scale Score	29 + 2 Constructed Responses
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Target Additional Item Count Contributing to Growth	29
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Field Test Items	5
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Overall Item Count
65

¹⁹ Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

²⁰ Figure 2 can be useful in understanding how AK STAR uses Summative Items and MAP Growth Items to produce a single summative test score and a suite of interim information by instructional areas.

Grade
5
Math

Summative Scale Score			
Assessed Content Strands	Target Item Count	Summative Points per Strand	Assessed AK Standards
Operations & Algebraic Thinking	3	3-5	5.OA.1 - 5.OA.3
Number & Operations	16	17-21	5.NBT.1 - 5.NBT.7; 5.NF.1 - 5.NF.7
Measurement & Data	8	8-10	5.MD.1; 5.MD.3; 5.MD.5 - 5.MD.7
Geometry	5	5-5	5.G.1 - 5.G.4
<i>Argumentation & Modeling</i>	2 <i>Constructed Responses</i>	<i>These items are included in the above Content Strands.</i>	

Additional Growth Items for Instructional Areas		
Instructional Areas	Target Item Count	Aligned AK Standards
OPERATIONS & ALGEBRAIC THINKING	12	K.OA.1 - K.OA.5 1.OA.1 - 1.OA.6 2.OA.1 - 2.OA.4 3.OA.1 - 3.OA.9 4.OA.1 - 4.OA.5 5.OA.1 - 5.OA.3 6.EE.2 - 6.EE.9; 6.RP.3 7.EE.1 - 7.EE.4; 7.EE.1 - 7.EE.3 8.EE.5; 8.EE.7b
NUMBER & OPERATIONS	N/A	K.CC.1 - K.CC.7; K.NBT.1 1.NBT.1 - 1.NBT.6 2.NBT.1 - 2.NBT.8 3.NBT.1 - 3.NBT.3; 3.NF.1 - 3.NF.3 4.NBT.1 - 4.NBT.6; 4.NF.1 - 4.NF.4 5.NBT.1 - 5.NBT.7; 5.NF.1 - 5.NF.7 6.NS.1 - 6.NS.7; 6.EE.1 7.NS.1 - 7.NS.3
MEASUREMENT & DATA	7	K.MD.2 - K.MD.3 1.MD.1 - 1.MD.4 2.MD.1 - 2.MD.10 3.MD.1 - 3.MD.8 4.MD.1 - 4.MD.7 5.MD.1 - 5.MD.5 6.G.1 - 6.G.2; 6.SP.4 7.G.6; 7.SP.2
GEOMETRY	10	K.G.1 - K.G.6 1.G.1 - 1.G.3 2.G.1 - 2.G.3 3.G.1 - 3.G.2 4.G.1 - 4.G.3 5.G.1 - 5.G.4 6.G.3 - 6.G.4; 6.NS.6c 7.G.3 8.G.5

Guideline for Overall RIT Score Items ²¹	Total AK STAR Points
Target Item Count per IA ²²	Target Range Points per IA
15	15
15	15-16
15	15
15	15

Item Count Contributing to AK STAR Scale Score	30 + 2 Constructed Responses
--	---------------------------------

Target Additional Item Count Contributing to Growth	29
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Field Test Items	5
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Overall Item Count

66

²¹ Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

²² **Figure 2** can be useful in understanding how AK STAR uses Summative Items and MAP Growth Items to produce a single summative test score and a suite of interim information by instructional areas.

Summative Scale Score			
Assessed Content Strands	Target Item Count	Summative Points per Strand	Assessed AK Standards
Ratio & Proportion	8	8-15	6.RP.1 - 6.RP.3
Number System	8	8-14	6.NS.1 - 6.NS.8
Expressions & Equations	9	9-13	6.EE.1 - 6.EE.9
Geometry	6	6-7	6.G.1 - 6.G.4
Statistics & Probability	6	6	6.SP.1 - 6.SP.5
<i>Argumentation & Modeling</i>	2 <i>Constructed Responses</i>	<i>These items are included in the above Content Strands.</i>	

Additional Growth Items for Instructional Areas		
Instructional Areas	Target Item Count	Aligned AK Standards
REAL & COMPLEX NUMBER SYSTEMS	N/A	3.NBT.2 - 3.NBT.3; 3.NF.2 - 3.NF.3; 3.OA.1 - 3.OA.8 4.NBT.4 - 4.NBT.6; 4.NF.1 - 4.NF.4; 4.OA.1 - 4.OA.4 5.NBT.2 - 5.NBT.7; 5.NF.1 - 5.NF.7 6.NS.1 - 6.NS.8; 6.RP.1 - 6.RP.3 7.NS.1 - 7.NS.3; 7.RP.1 - 7.RP.3 8.NS.1 - 8.NS.2 HSN-CN; HSN-Q; HSN-RN
OPERATIONS & ALGEBRAIC THINKING	6	3.OA.3 - 3.OA.9; 3.MD.7c 4.OA.2 - 4.OA.3; 4.NBT.5 5.OA.1 - 5.OA.3; 5.G.2; 5.NBT.2; 5.NF.2 - 5.NF.7 6.EE.1 - 6.EE.9 7.EE.1 - 7.EE.4 8.EE.1 - 8.EE.8; 8.F.1 - 8.F.5 HSA-APR; HSA-CED; HSA-REI; HSA-SSE; HSA-BF; HSA-IF; HSA-LE; HSA-TF
GEOMETRY	9	3.MD.5 - 3.MD.8 4.G.1 - 4.G.3; 4.MD.1 - 4.MD.7 5.G.2 - 5.G.4; 5.MD.3 - 5.MD.5; 5.NF.4b 6.G.1 - 6.G.4 7.G.1 - 7.G.6 8.G.1 - 8.G.9 HSG-C; HSG-CO; HSG-GMD; HSG-GPE; HSG-MG; HSG-SRT
STATISTICS & PROBABILITY	9	3.MD.3, 4.MD.4, 5.MD.2 6.SP.1 - 6.SP.5 7.SP.1 - 7.SP.8 8.SP.1 - 8.SP.4 HSS-CP; HSS-IC; HSS-ID

Guideline for Overall RIT Score Items ²³	Total AK STAR Points
Target Item Count per IA ²⁴	Target Range Points per IA
15	15-16
15	15-16
15	15-16
15	15

Item Count Contributing to AK STAR Scale Score	35 + 2 Constructed Responses
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Target Additional Item Count Contributing to Growth	24
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Field Test Items	5
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Overall Item Count

66

²³ Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

²⁴ Figure 2 can be useful in understanding how AK STAR uses Summative Items and MAP Growth Items to produce a single summative test score and a suite of interim information by instructional areas.

Grade
7
Math

Summative Scale Score			
Assessed Content Strands	Target Item Count	Summative Points per Strand	Assessed AK Standards
Ratio & Proportion	7	7-10	7.RP.1 - 7.RP.3
Number System	6	6-9	7.NS.1 - 7.NS.3
Expressions & Equations	9	10-16	7.EE.1 - 7.EE.4
Geometry	7	7-13	7.G.1 - 7.G.6
Statistics & Probability	7	7	7.SP.1 - 7.SP.8
<i>Argumentation & Modeling</i>	<i>2 Constructed Responses</i>	<i>These items are included in the above Content Strands.</i>	

Additional Growth Items for Instructional Areas		
Instructional Areas	Target Item Count	Aligned AK Standards
REAL & COMPLEX NUMBER SYSTEMS	2	3.NBT.2 - 3.NBT.3; 3.NF.2 - 3.NF.3; 3.OA.1 - 3.OA.8 4.NBT.4 - 4.NBT.6; 4.NF.1 - 4.NF.4; 4.OA.1 - 4.OA.4 5.NBT.2 - 5.NBT.7; 5.NF.1 - 5.NF.7 6.NS.1 - 6.NS.8; 6.RP.1 - 6.RP.3 7.NS.1 - 7.NS.3; 7.RP.1 - 7.RP.3 8.NS.1 - 8.NS.2 HSN-CN; HSN-Q; HSN-RN
OPERATIONS & ALGEBRAIC THINKING	6	3.OA.3 - 3.OA.9; 3.MD.7c 4.OA.2 - 4.OA.3; 4.NBT.5 5.OA.1 - 5.OA.3; 5.G.2; 5.NBT.2; 5.NF.2 - 5.NF.7 6.EE.1 - 6.EE.9 7.EE.1 - 7.EE.4 8.EE.1 - 8.EE.8; 8.F.1 - 8.F.5 HSA-APR; HSA-CED; HSA-REI; HSA-SSE; HSA-BF; HSA-IF; HSA-LE; HSA-TF
GEOMETRY	8	3.MD.5 - 3.MD.8 4.G.1 - 4.G.3; 4.MD.1 - 4.MD.7 5.G.2 - 5.G.4; 5.MD.3 - 5.MD.5; 5.NF.4b 6.G.1 - 6.G.4 7.G.1 - 7.G.6 8.G.1 - 8.G.9 HSG-C; HSG-CO; HSG-GMD; HSG-GPE; HSG-MG; HSG-SRT
STATISTICS & PROBABILITY	8	3.MD.3; 4.MD.4; 5.MD.2 6.SP.1 - 6.SP.5 7.SP.1 - 7.SP.8 8.SP.1 - 8.SP.4 HSS-CP; HSS-IC; HSS-ID

Guideline for Overall RIT Score Items ²⁵	Total AK STAR Points
Target Item Count per IA ²⁶	Target Range Points per IA
15	15
15	15-16
15	15
15	15

Item Count Contributing to AK STAR Scale Score	34 + 2 Constructed Responses	Target Additional Item Count Contributing to Growth	24	Field Test Items	5
Overall Item Count					
65					

²⁵ Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

²⁶ Figure 2 can be useful in understanding how AK STAR uses Summative Items and MAP Growth Items to produce a single summative test score and a suite of interim information by instructional areas.

Grade
8
Math

Summative Scale Score			
Assessed Content Strands	Target Item Count	Summative Points per Strand	Assessed AK Standards
The Number System	1	1	8.NS.1 - 8.NS.2
Expressions & Equations	10	10-17	8.EE.1 - 8.EE.8
Functions	11	11-14	8.F.1 - 8.F.5
Geometry	9	9-13	8.G.1 - 8.G.9
Statistics & Probability	5	5-6	8.SP.1 - 8.SP.4
<i>Argumentation & Modeling</i>	2 <i>Constructed Responses</i>	<i>These items are included in the above Content Strands.</i>	

Additional Growth Items for Instructional Areas		
Instructional Areas	Target Item Count	Aligned AK Standards
REAL & COMPLEX NUMBER SYSTEMS	11	3.NBT.2 - 3.NBT.3; 3.NF.2 - 3.NF.3; 3.OA.1 - 3.OA.8 4.NBT.4 - 4.NBT.6; 4.NF.1 - 4.NF.4; 4.OA.1 - 4.OA.4 5.NBT.2 - 5.NBT.7; 5.NF.1 - 5.NF.7 6.NS.1 - 6.NS.8; 6.RP.1 - 6.RP.3 7.NS.1 - 7.NS.3; 7.RP.1 - 7.RP.3 8.NS.1 - 8.NS.2 HSN-CN; HSN-Q; HSN-RN
OPERATIONS & ALGEBRAIC THINKING	N/A	3.OA.3 - 3.OA.9; 3.MD.7c 4.OA.2 - 4.OA.3; 4.NBT.5 5.OA.1 - 5.OA.3; 5.G.2; 5.NBT.2; 5.NF.2 - 5.NF.7 6.EE.1 - 6.EE.9 7.EE.1 - 7.EE.4 8.EE.1 - 8.EE.8; 8.F.1 - 8.F.5 HSA-APR; HSA-CED; HSA-REI; HSA-SSE; HSA-BF; HSA-IF; HSA-LE; HSA-TF
GEOMETRY	6	3.MD.5 - 3.MD.8 4.G.1 - 4.G.3; 4.MD.1 - 4.MD.7 5.G.2 - 5.G.4; 5.MD.3 - 5.MD.5; 5.NF.4b 6.G.1 - 6.G.4 7.G.1 - 7.G.6 8.G.1 - 8.G.9 HSG-C; HSG-CO; HSG-GMD; HSG-GPE; HSG-MG; HSG-SRT
STATISTICS & PROBABILITY	8	3.MD.3, 4.MD.4, 5.MD.2 6.SP.1 - 6.SP.5 7.SP.1 - 7.SP.8 8.SP.1 - 8.SP.4 HSS-CP; HSS-IC; HSS-ID

Guideline for Overall RIT Score Items ²⁷	Total AK STAR Points
Target Item Count per IA ²⁸	Target Range Points per IA
12	12
21	21-31
15	15-19
13	13-14

Item Count Contributing to AK STAR Scale Score	34 + 2 Constructed Responses
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Target Additional Item Count Contributing to Growth	25
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Field Test Items	5
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Overall Item Count
66

²⁷ Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

²⁸ Figure 2 can be useful in understanding how AK STAR uses Summative Items and MAP Growth Items to produce a single summative test score and a suite of interim information by instructional areas.

Grade
9
Math

Summative Scale Score			
Assessed Content Strands	Target Item Count	Summative Points per Strand	Assessed AK Standards ³⁰
Number & Quantity	4	5	N-RN.1-3 N-Q.1-3
Functions	15	19-25	F-IF.1-9 F-BF.1-4 F-LE.1-3,5
Algebra	15	15-26	A-SSE.1-3 A-APR.1,3 A-CED.1-4 A-REI.1,3-7,10-12
Geometry	N/A	N/A	N/A
Statistics & Probability	4	4-7	S-ID.1-3,5-9
<i>Argumentation & Modeling</i>	<i>2 Constructed Responses</i>	<i>These items are included in the above Content Strands.</i>	

Item Count Contributing to AK STAR Scale Score	36 + 2 Constructed Responses
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Additional Growth Items for Instructional Areas		
Instructional Areas	Target Item Count	Aligned AK Standards
REAL & COMPLEX NUMBER SYSTEMS	6	3.NBT.2 - 3.NBT.3; 3.NF.2 - 3.NF.3; 3.OA.1 - 3.OA.8 4.NBT.4 - 4.NBT.6; 4.NF.1 - 4.NF.4; 4.OA.1 - 4.OA.4 5.NBT.2 - 5.NBT.7; 5.NF.1 - 5.NF.7 6.NS.1 - 6.NS.8; 6.RP.1 - 6.RP.3 7.NS.1 - 7.NS.3; 7.RP.1 - 7.RP.3 8.NS.1 - 8.NS.2 N-CN; N-Q; N-RN
OPERATIONS & ALGEBRAIC THINKING	N/A	3.OA.3 - 3.OA.9; 3.MD.7c 4.OA.2 - 4.OA.3; 4.NBT.5 5.OA.1 - 5.OA.3; 5.G.2; 5.NBT.2; 5.NF.2 - 5.NF.7 6.EE.1 - 6.EE.9 7.EE.1 - 7.EE.4 8.EE.1 - 8.EE.8; 8.F.1 - 8.F.5 A-APR; A-CED; A-REI; A-SSE; A-BF; A-IF; A-LE; A-TF
GEOMETRY	10	3.MD.5 - 3.MD.8 4.G.1 - 4.G.3; 4.MD.1 - 4.MD.7 5.G.2 - 5.G.4; 5.MD.3 - 5.MD.5; 5.NF.4b 6.G.1 - 6.G.4 7.G.1 - 7.G.6 8.G.1 - 8.G.9 G-C; G-CO; G-GMD; G-GPE; G-MG; G-SRT
STATISTICS & PROBABILITY	6	3.MD.3, 4.MD.4, 5.MD.2 6.SP.1 - 6.SP.5 7.SP.1 - 7.SP.8 8.SP.1 - 8.SP.4 S-CP; S-IC; S-ID

Guideline for Overall RIT Score Items ²⁹	Total AK STAR Points
Target Item Count per IA ³¹	Target Range Points per IA
10	11
30	34-51
10	10
10	10 -13

Target Additional Item Count Contributing to Growth	22
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Field Test Items	5
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Overall Item Count

65

²⁹ Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

³⁰ Please refer to https://education.alaska.gov/standards/pdf/Grade_9_Math_Standards_Assessed12.17.21.pdf for the eligible standards and content limits in this grade.

³¹ **Figure 2** can be useful in understanding how AK STAR uses Summative Items and MAP Growth Items to produce a single summative test score and a suite of interim information by instructional areas.