

## **Test Blueprints**

**AK STAR English Language Arts and Mathematics** 

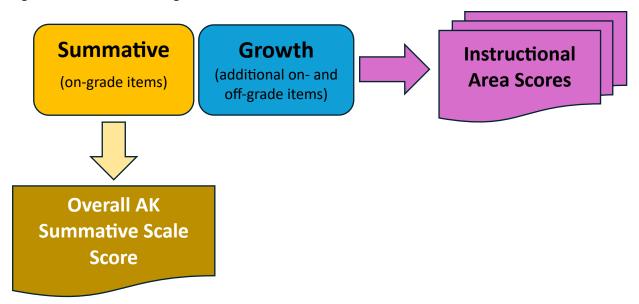
## Overview

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
  - o Produces a summative test score and proficiency determination
  - o 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

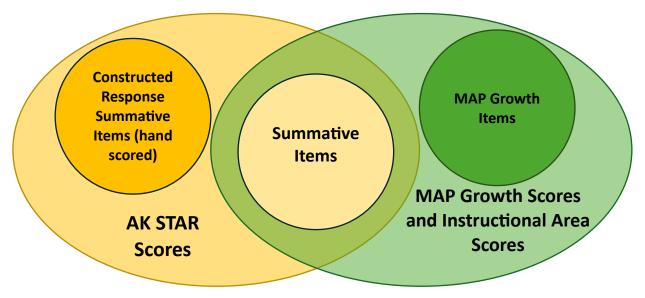
**Figure 1** illustrates how these two components work together to produce both a single summative test score and a suite of informative sub-scores by Instructional Area.

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.





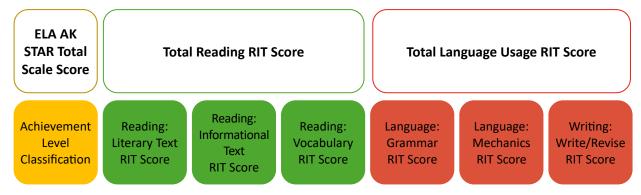
The AK STAR assessment is designed as an item-level adaptive test. Adaptive tests and their blueprints can typically be less prescriptive about exact item and point counts because the goal—unlike a linear assessment—is to use the adaptive nature to determine the test scores with the greatest precision 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.

The MAP Growth questions in the growth component for the AKSTAR assessment will follow the Enhanced Item Selection Algorithm (EISA) the same way as MAP Growth fall and winter interim assessments. EISA gives prioritization to grade-level questions and then adapts to questions up to two grades above or below the student's current grade. It is possible, though unlikely, for students to encounter questions that are more than two grade levels above or below their current grade level. The bolded standards in the following pages of this blueprint indicate the standards that are prioritized for each grade level.

## **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 Growth<sup>1</sup> 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)

<sup>&</sup>lt;sup>1</sup> ELA AK STAR aligns with MAP Growth Language Usage 2–12 and 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> <li>Analyze Theme and Literary Elements; Summarize</li> <li>Analyze Point of View, Features, and Structure</li> </ul>			
Informational Text	<ul> <li>Analyze Central Idea, Concepts, and Events; Summarize</li> <li>Analyze Point of View, Purpose, Features, and Structure</li> </ul>			
Vocabulary	Vocabulary			

**Table 3. Language Usage Instructional Areas** 

Language Usage					
Language: Understand, Edit for Grammar, Usage	<ul> <li>Parts of Speech</li> <li>Phrases, Clauses, Agreement, Sentences</li> </ul>				
Language: Understand, Edit Mechanics	<ul><li>Capitalization</li><li>Punctuation</li><li>Spelling</li></ul>				
Writing: Plan, Organize, Develop, Revise, Research	<ul> <li>Plan, Organize; Create Cohesion, Use Transitions</li> <li>Provide Support; Develop Topics; Conduct Research</li> <li>Establish and Maintain Style; Use Precise Language</li> <li>Purpose and Audience</li> </ul>				

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.

Grade **Guidelines for** Total AK STAR 4 ELA Additional Growth Items for Instructional Areas Overall RIT Score **Summative Scale Score** Points Items<sup>4</sup> Target Target Item Count Standards Standards RL.4.1-Reading 11 11-13 Literature RL.4.9 15 11 11-16 11 11 9 9 Language 8-9 L.4.1-L.4.3 5 9 Writing 13 9-11 22 Field Test Items Overall Item Count

Figure 4. English Language Arts Test Blueprint

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			Total AK STAR Points
Assessed Content Standards	Target Item Count	Summative Points Per Strand	Assessed AK Standards	Instructional Areas	Target Item Count	Aligned AK Standards	Target Item Count per IA <sup>3</sup>	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.12,3,5,6,7 RL.3,2,3,5,6,7,9 RL.3,2,3,5,6,7,9 RL.5,2,3,5,6,7,9 RL.6,2,3,5,6,9 RL.7,2,3,5,6,9 RL.8,2,3,5,6,9	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.2.2,3,5,6,7,8,9 RI.3.2,3,5,6,7,8,9 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.8.2,3,5,6,7,8,9	11	11–14
Vocabulary	5	5–7	L.3.4–L.3.6	VOCABULARY	6	L.K.4-6; RL.K.4; R.K.4 L.1.4-6; RL.1.4; R1.1.4 L.2.4-6; RL.2.4; R1.2.4 L.3.4-6; RL.3.4; R1.3.4 L.4.4-6; RL.5.4; R1.5.4 L.5.4-6; RL.5.4; R1.5.4 L.7.4-6; RL.5.4; R1.7.4 L.8.4-6; RL.8.4; R1.7.4	11	11–12
Language	8	8–9	L.3.1-L.3.3	LANGUAGE: GRAMMAR	4	L.K.1, <b>L.1.1, L.2.1</b> <b>L.3.1, L.4.1, L.5.1</b> L.6.1, L.7.1, L.8.1 L.9-10.1, L.11-12.1	8	8
Language	J	8 3	L.3.1 L.3.3	LANGUAGE: MECHANICS	4	L.K.2, <b>L.1.2, L.2.2</b> <b>L.3.2, L.4.2, L.5.2</b> 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 Constructe d Response)	12–13	W.3.1– W.3.5; W.3.7- W.3.8	WRITING: WRITE/REVISE	N/A	W.K.1-8 W.11-8 W.21-8; L.2.3 W.3.1-W.35; W.3.7-W.3.8; L.3.3 W.4.1-5; W.4.7-W.4.9; L.4.3 W.5.1-5; W.5.7-8; L.5.3 W.6.1-5; W.6.7-8; L.6.3 W.7.1-5; W.7.7-8; L.7.3 W.8.1-5; W.8.7-8; L.8.3 W.9-10.1-5; W.9-10.7-8; 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 C	ount			
	63							

<sup>&</sup>lt;sup>2</sup> Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.
<sup>3</sup> Figure 2 can be useful in understanding how AK STAR uses Summative items and MAP Growth items to produce a single summative score and a suite of diagnostic scores by instructional areas

G	rade
4	ELA

s	Summative Scale Score			Additional Growth	Additional Growth Items for Instructional Areas			Total AK STAR Points
Assessed Content Standards	Target Item Count	Summative Points Per Strand	Assessed AK Standards	Instructional Areas	Target Item Count	Aligned AK Standards	Target Item Count per IA <sup>5</sup>	Target Range Points per IA
Reading Literature	8	8–10	RL.4.1- RL.4.7; RL.4.9	LITERARY TEXT	3	RLK.2,3,5,6,7 RL1.2,3,5,6,7,9 RL3.2,3,5,6,7,9 RL3.2,3,5,6,7,9 RL4.2,3,5,6,7,9 RL5.2,3,5,6,7,9 RL7.2,3,5,6,9 RL7.2,3,5,6,9	11	11–13
Reading Informational Text	9	12–15	RI.4.1- RI.4.9	INFORMATIONAL TEXT	2	RI.K.3,5,6,7,8 RI.1.2,3,5,6,7,8,9 RI.2.2,3,5,6,7,8,9 RI.3.2,3,5,6,7,8,9 RI.4.2,3,5,6,7,8,9 RI.6.2,3,5,6,7,8,9 RI.6.2,3,5,6,7,8 RI.7.2,3,5,6,8,9 RI.8.2,3,5,6,7,8,9	11	11–16
Vocabulary	5	5	L.4.4–L.4.6	VOCABULARY	6	L.K.4-6; RLK.4; R.K.4 L.1.4-6; RL.14; R.1.14 L.2.4-6; RL.2.4; R.1.2.4 L.3.4-6; RL.3.4; R.1.3.4 L.4.4-6; RL.4.4; R.1.4.4 L.5.4-6; RL.6.4; R.1.5.4 L.6.4-6; RL.6.4; R.1.6.4 L.7.4-6; RL.7.4; R.1.7.4 L.8.4-6; R.R.8.4; R.1.8.4	11	11
1		0.0	144142	LANGUAGE: GRAMMAR	5	L.K.1, L.1.1, L.2.1 <b>L.3.1, L.4.1, L.5.1</b> <b>L.6.1</b> , L.7.1, L.8.1 L.9-10.1, L.11-12.1	9	9
Language	8	8–9	L.4.1-L.4.3	LANGUAGE: MECHANICS	5	L.K.2, L.1.2, <b>L.2.2</b> <b>L.3.2, L.4.2, L.5.2</b> <b>L.6.2</b> , L.7.2, L.8.2 L.9-10.2, L.11-12.2	9	9
Writing	9 (1 Hand- Scored Constructed Response)	13	W.4.1– W.4.5; W.4.7- W.4.9	WRITING: WRITE/REVISE	1	W.K.1-8 W.1.1-8; L.2.3 W.3.1-W.3.5; W.3.7-W.3.8; L.3.3 W.4.1-5; W.4.7-W.4.9; L.4.3 W.5.1-5; W.5.7-8; L.6.3 W.7.1-5; W.7.7-8; L.7.3 W.8.1-5; W.8.7-8; L.8.3 W.9.10.1-5; W.9-10.7-8; L.9-10.3 W.11-12.1-8; L.11-12.3	9	9–11
Item Count Contributing to AK STAR Scale Score	38 + 1 Constructed Response			Target Additional Item Count Contributing to Growth	22		Field Test Items	5
				Overall Item	Count			
	66							

<sup>&</sup>lt;sup>4</sup> Due to the adaptive nature of the test engine, these numbers are targets rather than requirements. <sup>5</sup> Figure 2 can be useful in understanding how AK STAR uses Summative items and MAP Growth items to produce a single summative score and a suite of diagnostic scores by instructional areas

G	rade
5	ELA

Su	ummative So	cale Score		Additional Growth Items for Instructional Areas			Guidelines for Overall RIT Score Items <sup>6</sup>	Total AK STAR Points
Assessed Content Standards	Target Item Count	Summative Points Per Strand	Assessed AK Standards	Instructional Areas	Target Item Count	Aligned AK Standards	Target Item Count per IA <sup>7</sup>	Target Range Points per IA
Reading Literature	8	9–10	RL.5.1- RL.5.7; RL.5.9	LITERARY TEXT	4	RLK.2,3,5,6,7 RL.1.2,3,5,6,7 RL.2,2,3,5,7,9 RL.3.2,3,5,6,7,9 RL.4.2,3,5,6,7,9 RL.5.2,3,5,6,7,9 RL.7.2,3,5,6,9 RL.7.2,3,5,6,9 RL.8.2,3,5,6	11	11–13
Reading Informational Text	11	12–16	RI.5.1– RI.5.9	INFORMATIONAL TEXT	1	RI.K.3,5,6,7,8,9 RI.1.2,3,5,6,7,8,9 RI.2.2,3,5,6,7,8,9 RI.3.2,3,5,6,7,8,9 RI.4.2,3,5,6,7,8,9 RI.6.2,3,5,6,7,8,9 RI.7.2,3,5,6,7,8 RI.7.2,3,5,6,8,9 RI.8.2,3,5,6,7,8,9	11	11–16
Vocabulary	5	5–8	L.5.4–L.5.6	VOCABULARY	7	L.K.4-6; R.L.K.4; R.I.K.4 L.1.4-6; R.L.1.4; R.I.1.4 L.2.4-6; R.L.2.4; R.I.2.4 L.3.4-6; R.L.3.4; R.I.3.4 L.4.4-6; R.L.3.4; R.I.3.4 L.5.4-6; R.L.5.4; R.I.5.4 L.6.4-6; R.L.6.4; R.I.5.4 L.7.4-6; R.L.6.4; R.I.6.4 L.8.4-6; R.R.8.4; R.I.8.4	11	11
	0	0.40		LANGUAGE: GRAMMAR	5	L.K.1, L.1.1, L.2.1 <b>L.3.1, L.4.1, L.5.1</b> <b>L.6.1, L.7.1</b> , L.8.1 L.9-10.1, L.11-12.1	9	9
Language	8	9–10	L.5.1–L.5.3	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
Writing	9 (1 Hand- Scored Constructed Response)	11–12	W.5.1– W.5.5; W.5.7- W.5.9	WRITING: WRITE/REVISE	1	W.K.1-8 W.118; L.2.3 W.3.1-W.3.5; W.3.7-W.3.8; L.3.3 W.4.1-5; W.4.7-W.4.9; L.4.3 W.5.1-5; W.5.7-8; L.5.3 W.6.1-5; W.5.7-8; L.6.3 W.7.1-5; W.7.7-8; L.7.3 W.8.1-5; W.8.7-8; L.8.3 W.9-10.1-5; W.9-10.7-8; L.9-10.3 W.11-12.1-8; L.11-12.3	9	9–11
Item Count Contributing to AK STAR Scale Score	40 + 1 Constructed Response			Target Additional Item Count Contributing to Growth	23		Field Test Items	5
				Overall Item 69	Count			

<sup>&</sup>lt;sup>6</sup> Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

<sup>7</sup> Figure 2 can be useful in understanding how AK STAR uses Summative items and MAP Growth items to produce a single summative score and a suite of diagnostic scores by instructional areas

G	rade
6	ELA

Assessed Content Standards	5	Summative So	cale Score		Additional Growtl	Additional Growth Items for Instructional Areas			Total AK STAR Points
Reading Literature	Content	Item	Points Per	AK	Instructional Areas	_	Standards		
Reading   Informational Text	_	9–10	13–14	RL.6.6;	LITERARY TEXT	2–3	RL.5.2,3,5,6,7,9 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
Vocabulary	Informational	10–12	10–14			1–2	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.9-10.2,3,5,6,8,9	12	12–13
Language   7-9   7-12   L.6.1-L.6.3   GRAMMAR   1-3   L.6.1, L.7.1, L.8.1   L.9.101, L.11-12.1   LANGUAGE: MECHANICS   4-5   L.8.2, L.4.2, L.5.2   L.6.2, L.7.2, L.8.2   L.6.2, L.7.2, L.7.2, L.8.2   L.6.2, L.7.2, L.7.2, L.7.2, L.7.2, L.7.2, L.7.2, L.7.2, L.7.2, L	Vocabulary	4–6	5–8	L.6.4–L.6.6	VOCABULARY	6–8	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;	12	12
LANGUAGE:   MECHANICS   4-5		7.0				4–5	L.6.1. L.7.1. L.8.1	9	9
Writing   Scored   Scored   Constructed   Response   11-12   W.6.1-   W.6.5;   W.6.7-   W.6.9   W.6.9   WRITING:   1   WRITING:   WRITE/REVISE   1   WRITING:   W.4.1-5; W.6.7-   W.6.9   WRITE/REVISE   1   WRITING:   W.4.1-5; W.6.7-   W.6.9   WRITE/REVISE   1   WRITING:   W.4.1-5; W.6.7-   W.6.9   W.6.9   W.4.1-5; W.6.7-   W.6.9   W.	Language	7–9	/-12	L.6.1-L.6.3		4–5	L.3.2, <b>L.4.2, L.5.2</b> <b>L.6.2, L.7.2, L.8.2</b>	9	9–11
Contributing to AK STAR Scale Score Response Count Contributing to Count Contributing Cou	Writing	Scored Constructed	11–12	W.6.5; W.6.7-		1	W.1.1-8 W.2.1-8; L.2.3 W.3.1-W3.5; W.3.7-W3.8; L.3.3 W.4.1-5; W.4.7-W4.49; L.4.3 W.5.1-5; W.5.7-8; L.5.3 W.6.1-5; W.6.7-8; L.6.3 W.7.1-5; W.7.7-8; L.8.3 W.9-10.1-5; W.9-10.7-8; L.9-10.3	9	9–10
Overall Item Count	Contributing to AK	Constructed			Count Contributing to Growth			Field Test Items	5
69						Count			

<sup>&</sup>lt;sup>8</sup> Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

<sup>9</sup> Figure 2 can be useful in understanding how AK STAR uses Summative items and MAP Growth items to produce a single summative score and a suite of diagnostic scores by instructional areas

G	rade
7	ELA

S	Summative Scale Score			Additional Growtl	n Items for Inst	Guidelines for Overall RIT Score Items <sup>10</sup>	Total AK STAR Points			
Assessed Content Standards	Target Item Count	Summative Points Per Strand	Assessed AK Standards	Instructional Areas	Target Item Count	Aligned AK Standards	Target Item Count per IA <sup>11</sup>	Target Range Points per IA		
Reading Literature	7–9	9–10	RL.7.1– RL.7.6; RL.7.9	LITERARY TEXT	4–5	R. 3. 2, 3, 5, 6, 7, 9 Rl. 4. 2, 3, 5, 6, 7, 9 Rl. 5. 2, 3, 5, 6, 7, 9 Rl. 6. 2, 3, 5, 6, 9 Rl. 7. 2, 3, 5, 6, 9 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.3.2,3,5,6,7,8,9 RI.4.2,3,5,6,7,8,9 RI.5.2,3,5,6,7,8,9 RI.6.2,3,5,6,7,8,9 RI.8.2,3,5,6,7,8,9 RI.9.10.2,3,5,6,8,9 RI.11-12.2,3,5,6,7,8,9	12	12–16		
Vocabulary	5–6	6–7	L.7.4–L.7.6	VOCABULARY	7–8	L.3.4-6; RL.3.4; Rl.3.4 L.4.4-6; RL.5.4; Rl.4.4 L.5.4-6; RL.5.4; Rl.5.4 L.7.4-6; RL.7.4; Rl.7.4 L.7.4-6; RL.7.4; Rl.7.4 L.8.4-6; RL.8.4; Rl.8.4 L.9.10.4-6; RL.9-10.4; Rl.9- 10.4 L.11-12.4-6; Rl.11-12.4; Rl.11-12.4;	12	12–13		
	0.40			LANGUAGE: GRAMMAR	3–5	L.K.1, L.1.1, L.2.1 L.3.1, L.4.1, <b>L.5.1</b> <b>L.6.1, L.7.1, L.8.1</b> <b>L.9-10.1</b> , L.11-12.1	9	9		
Language	8–10	10–14	L.7.1–L.7.3	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.7.5; W.7.7- W.7.9	WRITING: WRITE/REVISE	0–1	WK.1-8 W.1.1-8 W.1.2-8; L2.3 W.3.1-W.3.5; W.3.7-W.3.8; L3.3 W.4.1-5; W.4.7-W.4.9; L4.3 W.5.1-5; W.5.7-8; L5.3 W.5.1-5; W.6.7-8; L6.3 W.7.1-5; W.7-7-8; L.3 W.9.10.1-5; W.9-10.7-8; L9-10.3 W.11-12.1-8; L11-12.3	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 69	Count					
	69									

<sup>&</sup>lt;sup>10</sup> Due to the adaptive nature of the test engine, these numbers are targets rather than requirements. <sup>11</sup> Figure 2 can be useful in understanding how AK STAR uses Summative items and MAP Growth items to produce a single summative score and a suite of diagnostic scores by instructional areas

G	rade
8	ELA

S	Summative Scale Score			Additional Growtl	n Items for Inst	Guidelines for Overall RIT Score Items <sup>12</sup>	Total AK STAR Points	
Assessed Content Standards	Target Item Count	Summative Points Per Strand	Assessed AK Standards	Instructional Areas	Target Item Count	Aligned AK Standards	Target Item Count per IA <sup>13</sup>	Target Range Points per IA
Reading Literature	7–9	10–14	RL.8.1– RL.8.6; RL.8.9	LITERARY TEXT	3–5	RL3.2,3,5,6,7,9 RL4.2,3,5,6,7,9 RL5.2,3,5,6,7,9 RL.6.2,3,5,6,9 RL.7.2,3,5,6,9 RL.9.10,2,3,5,6,9 RL11-12.2,3,5,6,9	12	12–17
Reading Informational Text	10–12	14–17	RI.8.1- RI.8.9	INFORMATIONAL TEXT	1–2	RI.3.2,3,5,6,7,8,9 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.8.2,3,5,6,7,8,9 RI.9-10.2,3,5,6,8,9 RI.1-12.2,3,5,6,7,8,9	12	12–16
Vocabulary	5	5–7	L.8.4-L.8.6	VOCABULARY	7	L3.4-6; RL3.4; Rl3.4 L4.4-6; RL5.4; Rl5.4 L5.4-6; RL5.4; Rl5.4 L6.4-6; RL6.4; Rl6.4 L7.4-6; RL7.4; Rl7.4 L8.4-6; RL8.4; Rl8.4 L9-10.4-6; RL9-10.4; Rl9- 10.4 L11-12.4-6; RL11-12.4; Rl11-12.4	12	12–13
_	0.40			LANGUAGE: GRAMMAR	3–5	L.K.1, L.1.1, L.2.1 L.3.1, L.4.1, L.5.1 <b>L.6.1, L.7.1, L.8.1</b> <b>L.9-10.1</b> , L.11-12.1	9	9
Language	8–10	8–11	L.8.1-L.8.3	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.8.5; W.8.7- W.8.9	WRITING: WRITE/REVISE	0–1	W.K.1-8 W.1.1-8; L.2.3 W.3.1-W.3.5; W.3.7-W.3.8; L.3.3 W.4.1-5; W.4.7-W.4.9; L.4.3 W.5.1-5; W.5.7-8; L.5.3 W.6.1-5; W.6.7-8; L.6.3 W.7.1-5; W.7.7-8; L.7.3 W.8.1-5; W.8.7-8; L.8.3 W.9.10.1-5; W.9-10.7-8; 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 69	Count			

<sup>12</sup> 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 score and a suite of diagnostic scores by instructional areas

G	rade
9	ELA

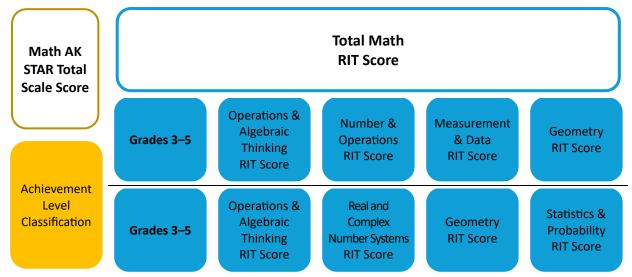
Summative Scale Score			Additional Growth	n Items for Inst	Guidelines for Overall RIT Score Items <sup>14</sup>	Total AK STAR Points	
	Summative Points Per Strand	Assessed AK Standards	Instructional Areas	Target Item Count	Aligned AK Standards	Target Item Count per IA <sup>15</sup>	Target Range Points per IA
Reading 6-8 Literature	8–12	RL.9-10.1- RL.9-10.6; RL.9-10.9	LITERARY TEXT	4–6	RL3.2,3,5,6,7,9 RL4.2,3,5,6,7,9 RL5.2,3,5,6,7,9 RL6.2,3,5,6,9 RL7.2,3,5,6,9 RL9-10,2,3,5,6,9 RL1-11.2,2,3,5,6,9	12	12–16
Reading Informational 12-14 Text	19–23	RI.9-10.1- RI.9-10.9	INFORMATIONAL TEXT	N/A	RI.3.2,3,5,6,7,8,9 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.8.2,3,5,6,7,8,9 RI.11.12.2,3,5,6,7,8,9	12	12–18
<b>Vocabulary</b> 5	5–6	L.9-10.4– L.9-10.6	VOCABULARY	7	L.3.4-6; RL.3.4; Rl.3.4 L.4.4-6; RL.5.4; Rl.5.4 L.5.4-6; RL.5.4; Rl.5.4 L.6.4-6; RL.7.4; Rl.7.4 L.7.4-6; RL.7.4; Rl.7.4 L.8.4-6; RL.8.4; Rl.8.4 L.9.10.4-6; Rl.9-10.4; Rl.9- 10.4 L.11-12.4-6; Rl.11-12.4; Rl.11-12.4;	12	12
Language 8–10	11–13	L.9-10.1-	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, <b>L.7.1, L.8.1</b> <b>L.9-10.1, L.11-12.1</b>	9	9
Language 8-10	11–13	L.9-10.3	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, <b>L.7.2, L.8.2</b> <b>L.9-10.2, L.11-12.2</b>	9	9–10
10–11 (1 Writing Constructed Response)	12–14	W.9-10.1- W.9- 10.1.5; W.9- 10.1.7- W.9-10.9	WRITING: WRITE/REVISE	N/A	W.K.1-8 W.1.1-8 W.1.1-8; L.2.3 W.3.1-W.3.5; W.3.7-W.3.8; L.3.3 W.4.1-5; W.4.7-W.4.9; L.4.3 W.5.1-5; W.5.7-8; L.5.3 W.5.1-5; W.5.7-8; L.6.3 W.7.1-5; W.7.7-8; L.7.3 W.8.1-5; W.8.7-8; L.8.3 W.9-10.1-5; W.9-10.7-8; L.9-10.3 W.11-12.1-8; L.11-12.3	9	9
Item Count 44 + 1 Contributing to AK Constructed STAR Scale Score Response			Target Additional Item Count Contributing to Growth	20		Field Test Items	5
			Overall Item	Count			

Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.
 Figure 2 can be useful in understanding how AK STAR uses Summative items and MAP Growth items to produce a single summative score and a suite of diagnostic scores 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 Growth<sup>16</sup> 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.

<sup>&</sup>lt;sup>16</sup> Math AK STAR aligns with MAP Growth Math 2–5 (grades 3–5) and with MAP Growth Math 6+ (grades 6–9).

**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)

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><li>Represent and Solve Problems</li><li>Analyze Patterns and Relationships</li></ul>						
Number and Operations	<ul> <li>Understand Place Value, Counting, and Cardinality</li> <li>Number and Operations in Base Ten</li> <li>Number and Operations—Fractions</li> </ul>						
Measurement and Data	<ul> <li>Geometric Measurement and Problem Solving</li> <li>Represent and Interpret Data</li> </ul>						
Geometry	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><li>Expressions and Equations</li><li>Use Functions to Model Relationships</li></ul>						
The Real and Complex Number Systems	<ul> <li>Ratios and Proportional Relationships</li> <li>Perform Operations</li> <li>Extend and Use Properties</li> </ul>						
Geometry	<ul> <li>Geometric Measurement and Relationships</li> <li>Congruence, Similarity, Right Triangles, &amp; Trig</li> </ul>						
Statistics and Probability	<ul> <li>Interpreting Categorical and Quantitative Data</li> <li>Using Sampling and Probability to Make Decisions</li> </ul>						

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

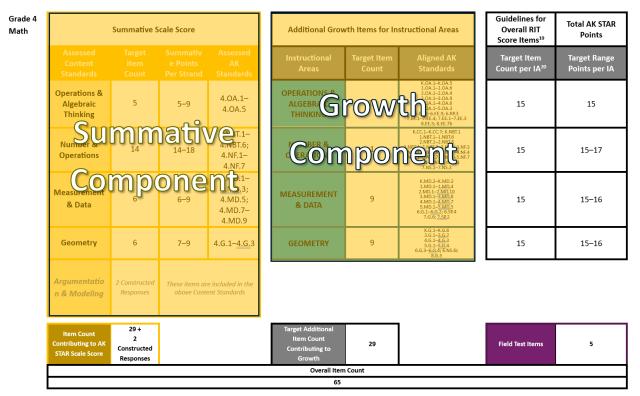


Figure 8 below displays the number of Math total items for each grade level.

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

Grade 3 Math

Summative Scale Score				Additional Grow	th Items for In	Guidelines fo Overall RIT Score Items <sup>1</sup>	Total AK STAR		
Assessed Content Standards	Target Item Count	Summative Points Per Strand	Assessed AK Standards	I	Instructional Areas	Target Item Count	Aligned AK Standards	Target Item Count per IA	Target Range Points per IA
Operations & Algebraic Thinking	11	11–15	3.OA.1– 3.OA.9		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	15	15
Number & Operations	8	8–12	3.NBT.1– 3.NBT.3; 3.NF.1– 3.NF.3		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	15	15
Measurement & Data	10	10–12	3.MD.1– 3.MD.2; 3.MD.4– 3.MD.5; 3.MD.7– 3.MD.10		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.2; 3.MD.4- 3.MD.5; 3.MD. 7-3.MD.8 4.MD.1–4.MD.3; 4.MD.5; 4.MD.7 5.MD.5–5.MD.5 6.G.1–6.G.2; 6.SP.4 7.G.6; 7.SP.2	15	15
Geometry	3	3	3.G.1– 3.G.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	15	15
Argumentation & Modeling	2 Constructed Responses	These items are above Conten							
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 65	Count			

Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.
 Figure 2 can be useful in understanding how AK STAR uses Summative items and MAP Growth items to produce a single summative score and a suite of diagnostic scores by instructional areas

Grade 4 Math

s	ummative S	cale Score		Addition	al Grow	th Items for In	structional Areas	Guidelines for Overall RIT Score Items <sup>19</sup>	Total AK STAR Points
Assessed Content Standards	Target Item Count	Summative Points Per Strand	Assessed AK Standards	Instruction Areas		Target Item Count	Aligned AK Standards	Target Item Count per IA <sup>20</sup>	Target Range Points per IA
Operations & Algebraic Thinking	5	5–9	4.OA.1– 4.OA.5	OPERATIO ALGEBR THINKII	AIC	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.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	15	15
Number & Operations	14	14–18	4.NBT.1– 4.NBT.6; 4.NF.1– 4.NF.7	NUMBE OPERATI		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	15	15–17
Measurement & Data	6	6–9	4.MD.1– 4.MD.3; 4.MD.5; 4.MD.7– 4.MD.9	MEASUREI & DAT		9	K.MD.2–K.MD.3 1.MD.1–1.MD.4 2.MD.1–2.MD.10 3.MD.1–3.MD.2; 3.MD.4- 3.MD.5; 3.MD.7-3.MD.8 4.MD.7-4.MD.3; 4.MD.5; 4.MD.7-5.MD.5 6.G.1–6.G.2; 6.SP.4 7.G.6; 7.SP.2	15	15–16
Geometry	6	7–9	4.G.1– 4.G.3	GEOME <sup>-</sup>	TRY	9	K.G.1-K.G.6 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 8.G.5	15	15–16
Argumentation & Modeling	2 Constructed Responses	These items are above Conten							
Item Count Contributing to AK STAR Scale Score	29 + 2 Constructed Responses			Target Addi Item Cou Contributi Growti	unt ng to h	29		Field Test Items	5
				Ove	erall Item ( 65	Count			

<sup>&</sup>lt;sup>19</sup> Due to the adaptive nature of the test engine, these numbers are targets rather than requirements. <sup>20</sup> Figure 2 can be useful in understanding how AK STAR uses Summative items and MAP Growth items to produce a single summative score and a suite of diagnostic scores by instructional areas

Grade 5 Math

Summative Scale Score									
Assessed Content Standards	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.G.1– 5.G.4						
Argumentation & Modeling	2 Constructed Responses	These items are above Conter							

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.3 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.2; 3.MD.4- 3.MD.5; 3.MD.7-3.MD.8 4.MD.1-4.MD.3; 4.MD.5; 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 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		

Guidelines for Overall RIT Score Items <sup>21</sup>	Total AK STAR Points
Target Item Count per IA <sup>22</sup>	Target Range Points per IA
15	15
15	15–16
15	15
15	15

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

66

Field Test Items 5

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

<sup>&</sup>lt;sup>22</sup> Figure 2 can be useful in understanding how AK STAR uses Summative items and MAP Growth items to produce a single summative score and a suite of diagnostic scores by instructional areas

Grade	6
Math	

Summative Scale Score				
Assessed Content Standards	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	
Argumentation & Modeling	2 Constructed Responses	These items are above Conter		
Item Count	35 +			

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-TE;	
GEOMETRY	9	-3.MD.5; 3.MD.7-3.MD.8 4.G.1-4.G.3; 4.MD.1-4.MD.3 4.MD.5; 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-MC; HSG-SRT	
STATISTICS & PROBABILITY	9	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	

0.1111 (	
Guidelines for Overall RIT Score Items <sup>23</sup>	Total AK STAR Points
Target Item Count per IA <sup>24</sup>	Target Range Points per IA
15	15–16
15	15–16
15	15–16
15	15

Item Count	35 +
Contributing to AK	2 Constructed
STAR Scale Score	Responses

Field Test Items

verall item e

66

 $<sup>^{\</sup>rm 23}$  Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

<sup>&</sup>lt;sup>24</sup> Figure 2 can be useful in understanding how AK STAR uses Summative items and MAP Growth items to produce a single summative score and a suite of diagnostic scores by instructional areas

Grade	7
Math	

Summative Scale Score				
Assessed Content Standards	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	
Argumentation & Modeling	2 Constructed Responses	These items are above Conter		

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-C, 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-TE;		
GEOMETRY	8	3.MD.5, 3.MD.7-3.MD.8 4.MD.1-4.MD.3; 4.MD.5; 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-GPF; HSG-MG; HSG-SRT		
STATISTICS & PROBABILITY	8	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		

Guidelines for Overall RIT Score Items <sup>25</sup>	Total AK STAR Points
Target Item Count per IA <sup>26</sup>	Target Range Points per IA
15	15
15	15–16
15	15
15	15

Item Count	34 +
Contributing to AK	2 Constructed
STAR Scale Score	Responses

65

Field Test Items 5

 $<sup>^{25}</sup>$  Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

<sup>&</sup>lt;sup>26</sup> Figure 2 can be useful in understanding how AK STAR uses Summative items and MAP Growth items to produce a single summative score and a suite of diagnostic scores by instructional areas

Grade 8	8
Math	

Summative Scale Score			
Assessed Content Standards	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
Argumentation & Modeling	2 Constructed Responses	These items are above Conter	

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.RR.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-FE
GEOMETRY	6	3.MD.5; 3.MD7-3.MD.8 4.G.1-4.G.3; 4.MD.1-4.MD.3; 4.MD.5; 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	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

Guidelines for Overall RIT Score Items <sup>27</sup>	Total AK STAR Points
Target Item Count per IA <sup>28</sup>	Target Range Points per IA
12	12
21	21–31
15	15–19
13	13–14

Item Count	34 +
Contributing to AK	2 Constructed
STAR Scale Score	Responses

Field Test Items 5

 $<sup>^{\</sup>rm 27}$  Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

<sup>&</sup>lt;sup>28</sup> Figure 2 can be useful in understanding how AK STAR uses Summative items and MAP Growth items to produce a single summative score and a suite of diagnostic scores by instructional areas

Grade 9 Math

Summative Scale Score			
Assessed Content Standards	Target Item Count	Summative Points Per Strand	Assessed AK Standards
The Number System	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
Argumentation & Modeling	2 Constructed Responses	These items are above Conter	
Item Count Contributing to AK STAR Scale Score	36 + 2 Constructed Responses		

Additional Growth Items for Instructional Areas			
Instructional Areas	Target Item Count	Aligned AK Standards	
REAL & COMPLEX NUMBER SYSTEMS	6	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-RE; A-SSE; A-BF; A-IF; A-LE; A-TF	
GEOMETRY	10	3.MD.5; 3.MD.7-3.MD.8 5.NF.4b 6.G.1–6.G.4 7.G.1–7.G.6 8.G.1-8.G.9 G-C; G-COW; G-GMD; G-GPE; G- MG; G-SRT	
STATISTICS & PROBABILITY	6	5.MD.2 6.SP.1-6.SP.5 <b>7.SP.1-7.SP.8</b> <b>8.SP.1-8.SP.4</b> S-CP; S-IC; S-ID	

Guidelines for Overall RIT Score Items <sup>29</sup>	Total AK STAR Points
Target Item Count per IA <sup>30</sup>	Target Range Points per IA
10	11
30	34–51
10	10
10	10–13

Item Count	36 +
Contributing to AK	2 Constructed
STAR Scale Score	Responses

Field Test Items 5

<sup>&</sup>lt;sup>29</sup> Due to the adaptive nature of the test engine, these numbers are targets rather than requirements.

<sup>&</sup>lt;sup>30</sup> Figure 2 can be useful in understanding how AK STAR uses Summative items and MAP Growth items to produce a single summative score and a suite of diagnostic scores by instructional areas