
Alaska 9 Algebra I

FREE PREVIEW

Full-Year Teacher Planner, Blank Editable Planner & School-Submission Binder

This preview shows the real structure and a genuine sample of the completed planner. The full product contains 9 units, 36 weekly plans and 180 daily plans, plus blank editable versions of every form.

State	Alaska
Grade	9 (High)
Subject	Algebra I
Course category	Mathematics
Standards family	Mathematics
Framework	Alaska Mathematics Standards
Issuing agency	Alaska Department of Education and Early Development
Scope	36 instructional weeks · 180 instructional days · 9 units

This is a statewide standards index, not a local course catalog. Course names, grade placement, electives, and graduation sequences vary by district.

What you get

Folder	Contents
01 START HERE	Read-me, contents, printing and digital instructions, standards verification guide, this preview
02 FILLED FULL YEAR	Completed planner in colour and ink-friendly PDF, plus editable DOCX
03 BLANK EDITABLE	Blank planner in colour, ink-friendly and fillable PDF, plus editable DOCX
04 ASSESSMENTS AND DATA	Baseline observation, quarterly rubrics, anecdotal forms, portfolio checklist
05 SCHOOL SUBMISSION	Submission covers, alignment summary, evidence checklist, observation, reflection, signature page
06 LICENSE AND CREDITS	Terms of use, credits and licences, copyright notice

The pages that follow are reproduced **exactly** as they appear in the full completed planner.

Week 9 — From a Situation to an Equation

Unit 3: Creating Equations From Situations · Month 3 · Quarter 1 · Semester 1 · Instructional Days 41–45

Essential question	How do you turn a paragraph into an equation?
Standards	Creating Equations in One Variable -> A-CED.4 Alaska Mathematics Standards / Algebra (CED) — Rearrange formulas (literal equations) to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm's law $V = IR$ to highlight resistance R. Reasoning with Equations and Inequalities A – REI Understand solving equations as a process of reasoning and explain the reasoning. N-CN.5 Alaska Mathematics Standards / Number and Quantity (CN) — (+) Represent addition, subtraction, multiplication, and conjugation of complex numbers geometrically on the complex plane; use properties of this representation for computation. For example, $(1 - \sqrt{3}i)^3 = 8$ because $(1 - \sqrt{3}i)$ has modulus 2 and argument 120°.
Learning target	"I can create an equation or inequality in one variable from a situation and solve it."
Local dates	_____ (enter your school dates)

Measurable objectives

- Students will create equations and inequalities in one variable and use them to solve problems in context, extending from linear contexts to quadratic, exponential and absolute value.

Success criteria (student-friendly)

- "I define the variable including its units."
- "I write an equation that says what the situation says."
- "I solve and interpret the answer in the situation."

Academic vocabulary

variable, define, constraint, inequality, context, interpret

Materials and technology

- Notebooks
- Printed contexts
- Chart paper
- Calculators as available

Differentiation and supports

Support area	This week's plan
Special education / IEP	Reduce group size; pair visual cue cards with all verbal directions; allow gesture or picture response in place of speech; pre-teach the week's target in a 1:1 warm-up.
Section 504	Provide the child's documented accommodations throughout; permit movement breaks and alternative seating at any point in the sequence.

Support area	This week's plan
Multilingual learners	Introduce each vocabulary word with an object or image; accept home-language responses; send the vocabulary list home where a translation is available; pair with a peer who shares the home language.
Advanced / extension	Ask the learner to teach the skill to a peer, extend the task, or record a demonstration for the class reference wall.
Intervention / reteach	Reteach the target in a short small group using the same materials; split the day's check for understanding into two smaller steps.
Enrichment	Extend into an open-ended centre or project connected to the essential question.

Assessment and evidence

Equations created from contexts, solved and interpreted.

Family communication

Ask your child what their variable stands for, exactly.

Day 41 — Defining the Variable Properly

Week 9, Day 1 · Unit 3 · Standards: A-CED.4, N-CN.5

Focus	The first step.
Learning target	"I can create an equation or inequality in one variable from a situation and solve it."
Vocabulary in use	variable, define, constraint, inequality, context, interpret
Local date	_____

Learning sequence

Connect: solving equations already given. Teach: defining a variable so that it names a QUANTITY with units and a reference point, not just a letter - and how a vague definition produces an unfixable equation. CONTEXTS ARE OBJECTS, PROCESSES AND PUBLISHED QUANTITIES; no context asks about a student's home, money or family. Try: shared definition for three situations. Apply: students define variables for four. Reflect: most wrong equations are wrong before any algebra happens.

Check for understanding

Student defines a variable with quantity and units.

Differentiation in the moment

If the learner...	Then...
needs more support	Model the step again with guided support, then fade to a gesture cue.
is ready for more	Invite the learner to demonstrate for a peer or add a second example.
is dysregulated	Pause instruction, move to co-regulation, and return to the target later.

Closure and reflection

Gather the group. Restate the learning target. Ask one learner to demonstrate. Name one specific thing the group did well, then preview tomorrow.

Teacher reflection (fictional example)

Fictional Example — Customize and Verify Before School Submission.

Most learners met the target. Two needed the visual cue repeated during guided practice; I will pre-teach with them tomorrow. The extension held attention longer than planned, so I shortened closure.

Day 42 — Linear Situations

Week 9, Day 2 • Unit 3 • Standards: A-CED.4, N-CN.5

Focus	Creating linear equations.
Learning target	"I can create an equation or inequality in one variable from a situation and solve it."
Vocabulary in use	variable, define, constraint, inequality, context, interpret
Local date	_____

Learning sequence

Connect: definitions. Teach: translating a linear situation phrase by phrase, keeping the equation readable back into English. Try: shared translation of two. Apply: students create and solve three. Reflect: if you cannot read it back as a sentence, check it.

Check for understanding

Student creates and solves a linear equation from context.

Differentiation in the moment

If the learner...	Then...
needs more support	Model the step again with guided support, then fade to a gesture cue.
is ready for more	Invite the learner to demonstrate for a peer or add a second example.
is dysregulated	Pause instruction, move to co-regulation, and return to the target later.

Closure and reflection

Gather the group. Restate the learning target. Ask one learner to demonstrate. Name one specific thing the group did well, then preview tomorrow.

Teacher reflection (fictional example)

Fictional Example — Customize and Verify Before School Submission.

Most learners met the target. Two needed the visual cue repeated during guided practice; I will pre-teach with them tomorrow. The extension held attention longer than planned, so I shortened closure.

Day 43 — Quadratic and Exponential Situations

Week 9, Day 3 • Unit 3 • Standards: A-CED.4, N-CN.5

Focus	Extending the range.
Learning target	"I can create an equation or inequality in one variable from a situation and solve it."
Vocabulary in use	variable, define, constraint, inequality, context, interpret
Local date	_____

Learning sequence

Connect: linear. Teach: contexts that are quadratic (area, projectile height as a supplied model) or exponential (repeated proportional change), and how the situation signals which. Try: shared work on two. Apply: students create and solve two. Reflect: the shape of the situation determines the shape of the equation.

Check for understanding

Student creates a quadratic or exponential equation from context.

Differentiation in the moment

If the learner...	Then...
needs more support	Model the step again with guided support, then fade to a gesture cue.
is ready for more	Invite the learner to demonstrate for a peer or add a second example.
is dysregulated	Pause instruction, move to co-regulation, and return to the target later.

Closure and reflection

Gather the group. Restate the learning target. Ask one learner to demonstrate. Name one specific thing the group did well, then preview tomorrow.

Teacher reflection (fictional example)

Fictional Example — Customize and Verify Before School Submission.

Most learners met the target. Two needed the visual cue repeated during guided practice; I will pre-teach with them tomorrow. The extension held attention longer than planned, so I shortened closure.

Day 44 — Absolute Value Situations

Week 9, Day 4 · Unit 3 · Standards: A-CED.4, N-CN.5

Focus	Tolerance and distance.
Learning target	"I can create an equation or inequality in one variable from a situation and solve it."
Vocabulary in use	variable, define, constraint, inequality, context, interpret
Local date	_____

Learning sequence

Connect: last week. Teach: absolute value in context as tolerance or distance from a target, which is where it genuinely arises. Try: shared modelling of a tolerance situation. Apply: students create and solve two. Reflect: absolute value in a context nearly always means 'how far off'.

Check for understanding

Student models a tolerance situation with absolute value.

Differentiation in the moment

If the learner...	Then...
needs more support	Model the step again with guided support, then fade to a gesture cue.
is ready for more	Invite the learner to demonstrate for a peer or add a second example.
is dysregulated	Pause instruction, move to co-regulation, and return to the target later.

Closure and reflection

Gather the group. Restate the learning target. Ask one learner to demonstrate. Name one specific thing the group did well, then preview tomorrow.

Teacher reflection (fictional example)

Fictional Example — Customize and Verify Before School Submission.

Most learners met the target. Two needed the visual cue repeated during guided practice; I will pre-teach with them tomorrow. The extension held attention longer than planned, so I shortened closure.

Day 45 — Inequalities and What They Allow

Week 9, Day 5 • Unit 3 • Standards: A-CED.4, N-CN.5

Focus	One-variable inequalities.
Learning target	"I can create an equation or inequality in one variable from a situation and solve it."
Vocabulary in use	variable, define, constraint, inequality, context, interpret
Local date	_____

Learning sequence

Connect: equations. Teach: creating inequalities where a situation gives a limit rather than an exact value, and interpreting the solution set as a RANGE of acceptable values. Try: shared work on two. Apply: students create, solve and interpret three. Reflect: most real constraints are inequalities, not equations.

Check for understanding

Student creates an inequality and interprets its solution set.

Differentiation in the moment

If the learner...	Then...
needs more support	Model the step again with guided support, then fade to a gesture cue.
is ready for more	Invite the learner to demonstrate for a peer or add a second example.
is dysregulated	Pause instruction, move to co-regulation, and return to the target later.

Closure and reflection

Gather the group. Restate the learning target. Ask one learner to demonstrate. Name one specific thing the group did well, then preview tomorrow.

Teacher reflection (fictional example)

Fictional Example — Customize and Verify Before School Submission.

Most learners met the target. Two needed the visual cue repeated during guided practice; I will pre-teach with them tomorrow. The extension held attention longer than planned, so I shortened closure.

Important before you buy

- This is a **digital download**. Nothing is shipped.
- The planner is **calendar-neutral**: Month 1–9, Week 1–36, Day 1–180, so it fits any school calendar. You add your own dates.
- Standards were transcribed from the official source.
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Source citation

Alaska Department of Education and Early Development. Alaska Mathematics Standards. ALASKA PUBLISHES NO HIGH SCHOOL MATHEMATICS COURSES, and that is the single most important thing to know before buying this row. Its 2012 standards drop grade levels entirely at high school and organise 148 standards into CONCEPTUAL CATEGORIES -- Number and Quantity, Algebra, Functions, Geometry, and Statistics and Probability. The document says so outright on its Courses and Transitions page: "These standards do not mandate the sequence of high school courses... IT IS A DISTRICT DECISION HOW TO DESIGN COURSE OFFERINGS covering the mathematics standards. Districts can use the traditional approach of Algebra I, Geometry, and Algebra II or implement an integrated approach." SO THERE IS NO ALASKA ALGEBRA I SET AND NO ALASKA GEOMETRY SET. This row selects the conceptual categories the named course conventionally covers, and THAT SELECTION IS THIS PLAN'S EDITORIAL JUDGEMENT RATHER THAN THE STATE'S. Check it against your own district's course design before buying; if your district runs an integrated pathway, the split will not match. THE STANDARD TEXT ITSELF IS TRANSCRIBED VERBATIM and nothing is invented. THIS ROW TAKES THE NUMBER AND QUANTITY, ALGEBRA AND FUNCTIONS CATEGORIES, which is what an Algebra I course conventionally draws on. It does NOT include the Geometry category, which the Geometry row takes, nor the whole of Statistics and Probability. Some of these standards are marked (+) in the document as ADDITIONAL STANDARDS FOR ADVANCED COURSES; they are registered as printed. Retrieved 2026-07-27 from https://education.alaska.gov/akstandards/math/adopted_math.pdf