

Secret Identities – Scoring Sheet

Student Name: _____

Place a score (1-4) in each row corresponding to the student's college readiness level.

Exceeding College Ready (4): Substantially exceeds the performance expectations**College Ready (3):** Shows proficiency in all of the performance expectations**Approaching College Ready (2):** Meets only some of the performance expectations**Initiating College Ready (1):** Does not yet meet the performance expectations

KEY COGNITIVE SKILLS	Student's Self-Assessment	Instructor's Score
Intellectual Curiosity (engages in scholarly inquiry and dialogue)		
Reasoning (consider arguments and conclusions of self and others; supports or modifies claims based on the results of an inquiry)		
Problem Solving (develops and applies multiple strategies to solve problems)		
Academic Behaviors (self-monitors learning needs and seeks assistance when needed; strives for accuracy and precision; perseveres to complete and master tasks)		
Work Habits (works independently)		
FOUNDATIONAL SKILLS	Student's Self-Assessment	Instructor's Score
Writing Across the Curriculum (writes clearly and coherently using standard writing conventions)		
MATHEMATICS STANDARDS	Student's Self-Assessment	Instructor's Score
Algebraic Reasoning (recognizes and uses algebraic properties, concepts, procedures, and algorithms to combine, transform, and evaluate expressions)		
Problem Solving and Reasoning (analyzes given information, formulates a plan or strategy, determines a solution, and justifies the solution)		
Communication and Representation (uses mathematical symbols, terminology, and notation to represent, communicate the mathematical concepts in a problem; uses mathematics as a language for reasoning, problem solving, making connections, and generalizing; communicates mathematical ideas, reasoning, their implications using symbols, diagrams, graphs, words)		

See reverse for
comments.

Score	College Readiness Level
32-36	Exceeding College Ready
27-31	College Ready
13-26	Approaching College Ready
0-12	Initiating College Ready

Total Score: _____

Grade: _____

See Scoring Guide for grade
conversion chart.

Secret Identities – Scoring Guide

Note: The letters and numbers of the skills below refer to their designation in the College and Career Readiness Standards.

KEY COGNITIVE SKILLS

A. Intellectual Curiosity

1. Engage in scholarly inquiry and dialogue.

College Ready Description: Student demonstrates a clear understanding of the problem by seeking a general formula describing each pattern and creating a new pattern in the same style.

Evidence for Scoring: In each pattern group, the student introduces a variable to represent the number that appears in a particular position.

B. Reasoning

1. Consider arguments and conclusions of self and others.

College Ready Description: Student understands the arguments and conclusions of other students.

Evidence for Scoring: Student participates in dialogue with others related to solving the given problem.

4. Support or modify claims based on the results of an inquiry.

College Ready Description: Student refines incorrect formulas after identifying counterexamples.

Evidence for Scoring: Student who guessed $((n-2)/n) - ((n-4)/(n+2)) = 2/(n(n+2))$ for Investigating step 1a recognizes that the numerators should not be described in relation to n but are instead all equal to 1.

C. Problem Solving

2. Develop and apply multiple strategies to solve problems.

College Ready Description: Student uses a range of methods to analyze the given patterns.

Evidence for Scoring: Student uses simple pattern recognition in Investigating step 1a to recognize that all numerators are equal to 1. Student uses guess-and-check in Investigating step 1c to recognize the second term on the right-hand side as the product of the two numbers appearing on the left-hand side.

D. Academic Behaviors

1. Self-monitor learning needs and seek assistance when needed.

College Ready Description: Student identifies areas of significant misunderstanding or difficulty and distinguishes these from questions whose solutions are not immediately obvious.

Evidence for Scoring: Student asks informed questions of other students and instructor.

3. Strive for accuracy and precision.

College Ready Description: Student carefully and correctly creates and works with equations to discover and represent identities. Student writes a concise and clear solution to a partner's secret identity problem.

Evidence for Scoring: Student creates three correct examples of the secret identity to give to a partner. Student provides only the necessary information and uses correct terminology and algebraic notation throughout.

4. Persevere to complete and master tasks.

College Ready Description: Student perseveres to complete the task, even though the patterns might not be apparent.

Evidence for Scoring: Student continues to seek patterns, even if the first several guesses are incorrect.

E. Work Habits

1. Work independently.

College Ready Description: Student can work through the problems by themselves.

Evidence for Scoring: Student completes the assignment individually.

FOUNDATIONAL SKILLS

B. Writing Across the Curriculum

1. Write clearly and coherently using standard writing conventions.

College Ready Description: Student correctly and effectively uses symbols, diagrams, graphs, and words to communicate the identities.

Evidence for Scoring: Student's written solution to a partner's identity problem is clear and sufficient to allow another student to re-create the work.

MATHEMATICS STANDARDS

II. Algebraic Reasoning

B.1. Manipulating expressions.

College Ready Descriptions: Student recognizes and uses algebraic properties, concepts, procedures, and algorithms to combine, transform, and evaluate expressions.

Evidence for Scoring: Student manipulates algebraic expressions to discover algebraic identities.

C.2. Solving equations, inequalities, and systems of equations.

College Ready Description: Student translates among multiple representations of equations and relationships.

Evidence for Scoring: Student uses algebraic manipulations to solve algebraic identities.

D.1. Representations.

College Ready Description: Student interprets multiple representations of equations and relationships.

Evidence for Scoring: Student is able to understand and identify equations expressed in a variety of ways, e.g., text, graphs, sequences.

VIII. Problem Solving and Reasoning

A.1, 2, 3, 4. Mathematical problem solving.

College Ready Descriptions: Student analyzes given information, formulates a plan or strategy, determines a solution, and justifies the solution.

Evidence for Scoring: Student formulates a strategy to solve a problem. Student creates a strategy for making a secret algebraic identity.

IX. Communication and Representation

A.1, 2, 3. Language, terms, and symbols of mathematics.

College Ready Descriptions: Student uses mathematical symbols, terminology, and notation to represent given and unknown information in a problem. Student uses mathematical language to represent and communicate the mathematical concepts in a problem. Student uses mathematics as a language for reasoning, problem solving, making connections, and generalizing.

Evidence for Scoring: Student recognizes patterns in algebraic expressions and communicates the pattern in writing and orally. Student finds a pattern in an equation and writes an equation that represents that pattern.

B.1. Interpretation of mathematical work.

College Ready Description: Student models and interprets mathematical ideas and concepts using multiple representations.

Evidence for Scoring: Student writes a symbolic representation for a verbal description of a relationship. Student creates his or her own algebraic identity from a set of guidelines.

C.1. Presentation and representation of mathematical work.

College Ready Description: Student communicates mathematical ideas, reasoning, and their implications using symbols, diagrams, graphs, and words.

Evidence for Scoring: Student explains his or her reasoning in written form. Student writes a solution to his or her partner's secret identity so another student can re-create their work.

Secret Identities – Scoring Instructions

Place a score (1-4) in each row of the scoring sheet corresponding to the student's college readiness level.

Exceeding College Ready (4): Substantially exceeds the performance expectations

College Ready (3): Shows proficiency in all of the performance expectations

Approaching College Ready (2): Meets only some of the performance expectations

Initiating College Ready (1): Does not yet meet the performance expectations

Suggested Grade Conversion:

This chart reflects equal weight given to each skill. As key cognitive skills, foundational skills, and discipline content knowledge are all important elements of college readiness, we recommend this grading approach. However, you may certainly choose to implement different weights to particular scales and assign a grade at your discretion.

Score	Grade		Score	Grade		Score	Grade		Score	Grade
36	100		28	87		20	77		12	68
35	99		27	85		19	76		11	66
34	98		26	84		18	75		10	64
33	96.5		25	83		17	74		9	62
32	95		24	81.5		16	73		8	60
31	93		23	80		15	72			
30	91		22	79		14	71			
29	89		21	78		13	70			