



Linkage of Mathematics Content Standards to CASAS test forms

	Life Skills Series				Employability Competency System			
	A	B	C	D	A	B	C	D
Pre- and Post-test Levels and Form #'s	31	33	35	37	11	13	15	17
	32	34	36	38	12	14	16	18

Grade Seven Number Sense

1.3 Convert fractions to decimals and percents and use these representations in estimations, computations, and applications.			•	•				
1.6 Calculate the percentage of increases and decreases of a quantity.								•
1.7 Solve problems that involve discounts, markups, commissions, and profit and compute simple and compound interest.				•			•	•

Grade Seven Algebra and Functions

1.1 Use variables and appropriate operations to write an expression, an equation, an inequality, or a system of equations or inequalities that represents a verbal description (e.g., three less than a number, half as large as area A).								•
1.5 Represent quantitative relationships graphically and interpret the meaning of a specific part of a graph in the situation represented by the graph.			•				•	•

Grade Seven Measurement and Geometry

1.1 Compare weights, capacities, geometric measures, times, and temperatures within and between measurement systems (e.g., miles per hour and feet per second, cubic inches to cubic centimeters).				•				
1.2 Construct and read drawings and models made to scale.			••			•		

KEY

- = 1-2 test items per form
- = 3-4 test items per form
- = 5 or more test items per form

The key shows the average number of items per test form at each CASAS test level that address the particular standard (total items per test ranges from 24 to 36). Individual test items are correlated to only one standard.

Pre- and Post-test Levels and Form #'s	Life Skills Series				Employability Competency System			
	A	B	C	D	A	B	C	D
	31 32	33 34	35 36	37 38	11 12	13 14	15 16	17 18
2.1 Use formulas routinely for finding the perimeter and area of basic two-dimensional figures and the surface area and volume of basic three-dimensional figures, including rectangles, parallelograms, trapezoids, squares, triangles, circles, prisms, and cylinders.			•	•				•
2.2 Estimate and compute the area of more complex or irregular two-and three-dimensional figures by breaking the figures down into more basic geometric objects.			•					•
2.4 Relate the changes in measurement with a change of scale to the units used (e.g., square inches, cubic feet) and to conversions between units (1 square foot = 144 square inches or [1 ft 2] = [144 in 2], 1 cubic inch is approximately 16.38 cubic centimeters or [1 in 3] = [16.38 cm3]).			•	•			•	
3.3 Know and understand the Pythagorean theorem and its converse and use it to find the length of the missing side of a right triangle and the lengths of other line segments and, in some situations, empirically verify the Pythagorean theorem by direct measurement.								•

Grade Six Number Sense

1.3 Use proportions to solve problems (e.g., determine the value of N if $\frac{4}{7} = \frac{N}{21}$, find the length of a side of a polygon similar to a known polygon). Use cross-multiplication as a method for solving such problems, understanding it as the multiplication of both sides of an equation by a multiplicative inverse.			•					
1.4 Calculate given percentages of quantities and solve problems involving discounts at sales, interest earned, and tips.		•	•••	•••		•	••	••
2.1 Solve problems involving addition, subtraction, multiplication, and division of positive fractions and explain why a			•	••				••

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particular operation was used for a given situation.								

Grade Six Algebra and Functions

2.1 Convert one unit of measurement to another (e.g., from feet to miles, from centimeters to inches).	•	•	•	•	•	•	•	•
2.3 Solve problems involving rates, average speed, distance, and time.			•			•		

Grade Six Statistics, Data Analysis and Probability

3.3 Represent probabilities as ratios, proportions, decimals between 0 and 1, and percentages between 0 and 100 and verify that the probabilities computed are reasonable; know that if P is the probability of an event, 1-P is the probability of an event not occurring.								•
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Grade Six Mathematical Reasoning

2.3 Estimate unknown quantities graphically and solve for them by using logical reasoning and arithmetic and algebraic techniques.								•
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Grade Five Number Sense

1.2 Interpret percents as a part of a hundred; find decimal and percent equivalents for common fractions and explain why they represent the same value; compute a given percent of a whole number.				•				
1.5 Identify and represent on a number line decimals, fractions, mixed numbers, and positive and negative integers.		•	••	•	•	•	•	
2.1 Add, subtract, multiply, and divide with decimals; add with negative integers; subtract positive integers from negative integers; and verify the reasonableness of the results	•	•••	•••	•••	••	•••	•••	•••
2.2 Demonstrate proficiency with division, including division with positive decimals and long division with multidigit divisors.	•	•				•		

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2.3 Solve simple problems, including ones arising in concrete situations, involving the addition and subtraction of fractions and mixed numbers (like and unlike denominators of 20 or less), and express answers in the simplest form.			•			•		
2.5 Compute and perform simple multiplication and division of fractions and apply these procedures to solving problems.						•		

Grade Five Algebra and Functions

1.1 Use information taken from a graph or equation to answer questions about a problem situation.	•	•	•	•	•	•	•••	
1.5 Solve problems involving linear functions with integer values; write the equation; and graph the resulting ordered pairs of integers on a grid.								•

Grade Five Measurement and Geometry

1.1 Derive and use the formula for the area of a triangle and of a parallelogram by comparing it with the formula for the area of a rectangle (i.e., two of the same triangles make a parallelogram with twice the area; a parallelogram is compared with a rectangle of the same area by cutting and pasting a right triangle on the parallelogram).							•	
1.3 Understand the concept of volume and use the appropriate units in common measuring systems (i.e., cubic centimeter [cm ³], cubic meter [m ³], cubic inch [in ³], cubic yard [yd ³]) to compute the volume of rectangular solids.			•			•		

Grade Five Statistics, Data Analysis and Probability

1.1 Know the concepts of mean, median, and mode; compute and compare simple examples to show that they may differ.				•				
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