ECS Math Form 18M

CONTENT STANDARDS MATRIX

Test Item Correlation to Basic Skills Content Standards

_____
Name of Examinee (or Class)

_____
Date

TO USE AS A CHECKLIST:

1. Review test results. At top, mark items + or − .
2. Highlight dots for items answered correctly or incorrectly, depending on overall test performance.
3. At left, check standards frequently missed to target in instruction. Compare to total* times standard appears.

(Use Competency Matrix to assess performance by competency.)

Test item number / Mark + if correct, − if incorrect / CASAS competencies addressed ▶

Item	Competencies	Task*
1	4.4.8, 6.5.1, 6.2.3	3
2	4.4.8, 6.5.1, 6.2.4	3
3	6.3.2	0
4	6.3.3	0
5	6.8.2	3
6	1.1.5, 6.1.2	3
7	2.3.1, 6.6.6	3
8	4.4.6, 6.0.2, 6.2.5	2
9	4.4.6, 6.7.1, 6.2.2	2
10	4.4.6, 6.7.1, 6.2.2	2
11	4.7.2, 6.4.1	2
12	4.7.2, 6.4.1, 6.2.3	2
13	4.7.2, 6.4.1, 6.2.5	2
14	4.7.3, 6.4.3	2
15	4.7.3, 6.7.5, 6.2.2	2
16	4.7.3, 6.7.5	2
17	4.7.3, 6.4.1, 6.1.1	3
18	6.6.3, 6.6.5	5
19	6.6.3, 6.6.5, 6.5.2	5
20	6.6.5, 6.6.3, 6.6.8, 6.4.6	5
21	6.6.5, 6.6.8	5
22	6.6.5, 6.6.1, 6.6.2, 6.1.5	5
23	6.5.2, 6.6.5	5
24	6.5.3, 6.0.4	3
25	6.6.1, 1.1.2	3
26	6.6.1, 1.1.2	3
27	4.2.1, 6.3.3, 6.4.1	2
28	6.6.3, 6.6.5, 6.5.2, 6.3.3	3
29	6.6.3, 6.6.5, 6.5.2, 6.4.6, 6.3.3	3
30	6.6.6, 6.2.4	3
31	6.6.6, 6.2.3	3
32	6.5.3, 6.0.4	3

Basic Skills Content Standard (Total* | Code | Description | item numbers with dots)

Total*	Code	Basic Skills Content Standard	Item numbers marked
1	M1.3.7	express a relation between two quantities as a fraction or fractional estimate (54 of 352 graduates = 54/352; or about 1/6)	20
1	M1.3.10	add and subtract fractions and mixed numbers with different denominators	3
1	M1.3.11	relate multiplication of fractions and division (i.e., multiplying by 1/4 is equivalent to dividing by 4)	28
3	M1.3.12	multiply and divide with fractions and mixed numbers	4, 30, 31
2	M1.4.1	understand decimal notation and place value	8, 10
2	M1.4.4	read, write, order and compare decimals of three or more places	8, 10
1	M1.4.5	divide whole numbers and represent quotient as a decimal	2
9	M1.4.7	add, subtract, multiply and divide decimals	1, 8, 10, 11, 12, 13, 15, 25, 26
6	M1.4.12	use decimals in the context of measurement units	1, 2, 8, 10, 25, 26
3	M1.4.16	calculate with money amounts	11, 12, 13
1	M1.5.5	represent decimal amounts as percents	24
1	M1.5.7	find a given percent of a number	17
1	M1.5.11	calculate percent of increase and decrease	14
5	M1.5.12	apply percents to money, measurement, and other contextual situations	11, 12, 13, 17, 27

Task: 0 General; 1 Forms; 2 Charts, maps, consumer billings, matrices, graphs, tables; 3 Articles, paragraphs, sentences, directions, manuals; 4 Signs, price tags, advertisements, product labels; 5 Measurement scales, diagrams; 6 Oral cue.

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		Test item number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
		Mark + if correct, − if incorrect																																
1	M1.6.3	express a relationship between two quantities as a ratio																				•												
2	M1.6.4	write and solve a proportion																									•	•						
1	M1.6.5	apply ratio and proportion in contextual situations using ratios																						•										
11	M1.7.1	analyze a math-related situation or problem, identifying the mathematical question that needs to be answered, the most appropriate methods, procedures, algorithms and operations to apply, and the relevant and irrelevant information												•	•		•		•		•	•	•	•						•	•	•		
1	M2.1.1	recognize the numerical patterns and relationships inherent in the addition and multiplication tables																				•												
2	M2.2.3	reason mathematically regarding contextual situations																							•									•
1	M2.2.6	know and use notational conventions such as parentheses and the various ways of representing multiplication																							•									
1	M2.3.1	understand and solve simple one-step equations with unknowns (e.g., $n - 7 = 9$; $3x = 24$)																												•				
3	M2.3.11	interpret or write an expression or equation for a contextual situation that involves fractions, decimals or percents																							•					•				•
2	M2.3.13	solve problems involving technical formulas (e.g., $V = I \times R$)	•	•																														
1	M2.3.16	know, understand and apply the Pythagorean theorem																						•										
1	M2.5.4	add, subtract, multiply and divide positive and negative numbers						•																										
6	M3.3.4	interpret diagrams (e.g., floor plan, blueprint)																•	•	•	•	•	•											
1	M3.3.6	enlarge or reduce a shape, keeping the same proportions																					•											
1	M4.1.2	read and record time of day in 12-hour format							•																									
1	M4.1.7	calculate with units of time: hours, minutes, seconds							•																									
2	M4.1.9	convert hours and minutes to decimal time format																														•	•	
1	M4.2.3	estimate equivalents between feet/miles and meters/kilometers																									•							

		Test item number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
		Mark + if correct, − if incorrect																																
1	M4.4.1	understand, interpret, calculate and apply rates involving time, such as velocity (e.g., mi/hr, ft/sec, m/sec), frequency (e.g., calls/hr), consumption (e.g., cal/day, kw/hr), flow (e.g., gal/min), change (e.g., degrees/min, inches/year)																•																
1	M4.5.1	understand Fahrenheit scale, including negative temperatures						•																										
1	M4.5.3	compare and calculate with temperatures						•																										
4	M4.8.6	calculate with inches, feet, etc.																		•	•			•	•									
2	M4.8.7	compare linear measurements, including in decimal notation (e.g., tolerances)								•		•																						
1	M4.8.8	estimate equivalents between customary US and metric units of linear measure																										•						
2	M4.8.12	interpret scale drawings																		•	•													
2	M4.8.13	interpret and use proportions in solving problems involving dimensions or scale																													•	•		
2	M4.9.1	understand concept of two and three-dimensional measurements, square and cubic units																				•		•										
2	M4.9.3	calculate area of rectangles and other common figures, using a given formula																				•		•										
1	M4.9.5	calculate volume and surface area of rectangular and other common shapes, using a given formula																													•			
2	M4.9.6	calculate area or volume of irregular or composite shapes by dividing the figure into parts																		•	•													
8	M5.1.1	identify, count and extract data in lists, tables and charts								•			•	•	•	•	•	•											•					
2	M5.1.4	extract information from line graphs									•	•																						
1	M5.2.4	find the mean and range for a data set															•																	
1	M5.2.12	understand and use the basic language of statistics to describe, communicate and discuss data								•																								
2	M5.4.1	understand what the numbers in a data set represent									•	•																						
1	M5.4.2	understand different ways in which data can be identified, organized and formatted										•																						
1	M6.2.2	express the likelihood of an occurrence as a ratio fraction or a percent					•																											

       See www.casas.org for complete list of content standards and competencies

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Summary of CASAS competencies covered on Form 18M Number in parentheses shows the number of test items addressing the competency, if more than one.							
1.1.2 (2)	2.3.1	4.2.1	6.0.2	6.2.3 (3)	6.4.3	6.6.2	6.7.5 (2)
1.1.5		4.4.6 (3)	6.0.4 (2)	6.2.4 (2)	6.4.6 (2)	6.6.3 (5)	6.8.2
		4.4.8 (2)	6.1.1	6.2.5 (2)	6.5.1 (2)	6.6.5 (8)	
		4.7.2 (3)	6.1.2	6.3.2	6.5.2 (4)	6.6.6 (3)	
		4.7.3 (4)	6.1.5	6.3.3 (4)	6.5.3 (2)	6.6.8 (2)	
			6.2.2 (3)	6.4.1 (5)	6.6.1 (3)	6.7.1 (2)	
Refer to Competency Matrix for detailed information on competency coverage.							