

Table 1.1 California - Alignment Among the Technical, Content, and Cognitive Demands Categories for the Math Assessments

Test	Format				Context	Graphs			Diagrams			Formulas		Content								Cognitive Demands		
	MC	QC	GR	OE	C	S	RO	P	S	RO	P	M	G	PA	EA	IA	CG	PG	TR	SP	MISC	CU	PK	PS
<u>State Achievement Tests</u>																								
GSE Algebra	95	0	0	5	15	0	5	0	10	0	0	10	0	0	52	0	19	14	0	10	5	24	71	5
GSE Geometry	95	0	0	5	10	0	0	5	75	0	0	25	0	0	0	0	5	86	10	0	0	52	38	10
GSE HS Math	92	0	0	8	33	0	5	0	23	0	5	15	0	23	15	0	23	23	0	15	0	62	23	15
Stanford 9	100	0	0	0	58	21	4	0	19	0	0	6	6	0	13	2	19	19	4	40	4	63	31	6
<u>College Admissions Tests</u>																								
ACT	100	0	0	0	22	5	2	0	13	0	0	15	0	17	22	5	15	25	8	3	5	40	53	7
SAT I	58	25	17	0	25	7	0	0	18	0	0	1	8	13	37	2	6	19	0	13	11	32	53	15
SAT II Math Level IC	100	0	0	0	18	8	0	0	26	0	0	12	0	2	30	10	12	28	4	8	6	34	58	8
SAT II Math Level IIC	100	0	0	0	12	12	2	0	2	0	0	10	0	2	14	22	12	14	18	6	12	26	54	20
<u>College Placement Tests</u>																								
Algebra Readiness Test	100	0	0	0	26	9	0	0	12	0	0	8	2	42	20	0	2	12	0	8	0	16	84	0
CSU Entry-Level Math Placement Exam	100	0	0	0	24	0	0	0	16	0	0	18	0	6	32	8	16	14	2	22	0	28	70	2
Math Analysis Readiness	100	0	0	0	7	0	2	0	18	0	0	18	0	2	31	31	7	29	0	0	0	13	82	4

Table continues

Test	Format				Context	Graphs			Diagrams			Formulas		Content							Cognitive Demands			
	MC	QC	GR	OE	C	S	RO	P	S	RO	P	M	G	PA	EA	IA	CG	PG	TR	SP	MISC	CU	PK	PS
Second year Algebra Readiness Test	100	0	0	0	7	6	4	0	22	0	0	16	0	2	60	0	4	33	0	0	0	16	82	2

Notes.

Format

MC = multiple-choice items  
 QC = quantitative comparison items  
 GR = fill-in-the-grid items  
 OE = open-ended items

Contextualization

C = contextualized items

Diagrams

S = graph/diagram within item-stem  
 RO = graph/diagram within response options  
 P = graph/diagram needs to be produced

Formulas

M = formula needs to be memorized  
 G = formula is provided

Content Areas

PA = prealgebra  
 EA = elementary algebra  
 IA = intermediate algebra  
 CG = coordinate geometry  
 PG = plane geometry  
 TR = trigonometry  
 SO = statistics and probability  
 MISC = miscellaneous topics

Cognitive Demands

CU = conceptual understanding  
 PK = procedural knowledge  
 PS = problem-solving