

Field 208 – Mathematics

Alignment of Test Framework Objectives with State and National Standards

Illinois Licensure Testing System Framework Objectives for Mathematics	State Board of Education Rules- Title 23 of the Illinois Administrative Code-27.130	NCTM/CAEP Standards for Mathematics Teacher Preparation	Common Core State Standards Initiative- Common Core State Standards
Subarea I: Mathematical Practices, Technology, and Disciplinary Literacy			
0001 Understand mathematical practices.	a2 A; b1; b2 A-B; C1; C2 A-B; d1 A-B; d2 A-B; i3 A B; i6 A- B	2a-f	HS
0002 Understand how to select, integrate, and use appropriate technologies in the mathematics classroom.	c2A; e1 A-B; e2 A-B; f4 A-B; j5 B; i6 A	3c, 4e	HS
0003 Understand the process of reading, and apply knowledge of strategies for promoting students' reading development in the mathematics classroom.	k1 A–H; k2 A–J		6–12.R.ST
Subarea II: Number Systems and Operations			
0004 Understand the real number system and its operations.	a1 B; a2 A; a2 C; C2 A; e1 A; e1 B; e2 A; e2 B; f1 Ai-iii; f2 A; f3 A i-iii; g1B iii; g3 C I; h1 A1; h4 A I; h5 A I	1a; 3a-g; 4e; A.1.1; A.1.2; A.1.3	
0005 Understand the properties of complex numbers and linear algebra.	a1 B; a2 A; a2 C; C2 A; e1 A; e1 B; e2 A; e2 B; f1 B; f1 C; 3B- C; h2 C; h4 B; h5 B ii; h6 C	1a; 3a-g; 4e; A.1.1; A.1.4, A.2.5; A.2.5	
Subarea III: Functions and Algebra			
0006 Understand algebraic techniques.	a1 B; a2 A; a2 C; C2 A; e1 A; e1 B; e2 A; e2 B; f2 B; h1 A i- 1v; h1 B; h2 A i-ii; h2 B; h2 C; h5 A i- vii; h5 B I; h5 C iii; h6 A i-ii; h6 B i	1a; 3a-g; 4e; A.2.1; A.2.2; A.5.3; A.6.1	

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0007 Understand functions and the properties of linear relations and functions.	a1 B; a2 A; a2 C; C2 A; e1 A; e1 B; e2 A; e2 B; h1 B; h2 A i-ii; h2 B; h2 C; h5 B i-iii; h6 A i-ii; h6 B i-ii	1a; 3a-g; 4e; A.2.1; A.2.3; A.2.4	
0008 Understand quadratic functions and conic sections.	a1 B; a2 A; a2 C; C2 A; e1 A; e1 B; e2 A; e2 B; h1. B; h2 A i-ii; h2 B; h2 C; h5 B I, iii; h6 A i-ii; h6 B i-ii	1a; 3a-g; 4e; A.2.2; A.2.3; A.2.4; A.3.9	
0009 Understand polynomial, absolute value, radical, and rational functions and inequalities.	a1 B; a2 A; a2 C; C2 A; e1 A; e1 B; e2 A; e2 B; h1 B; h2 A i-ii; h2 B; h2 C; h5 B I, iii; h6 A i-ii; h6 B i-ii	1a; 3a-g; 4e; A.2.2; A.2.3; A.2.4	
0010 Understand exponential and logarithmic functions.	a1 B; a2 A; a2 C; C2 A; e1 A; e1 B; e2 A; e2 B; h1 B h2 A i-ii; h2 B; h2 C; h5 B I, iii; h6 A i-ii; h6 B i-iii	1a; 3a-g; 4e; A.2.2; A.2.3; A.2.4	
0011 Understand trigonometric functions.	a1 B; a2 A; a2 C; C2 A; e1 A; e1 B; e2 A; e2 B; h1 B; h2 A i-ii; h2 B; h2 C; h5 B i, iii; h6 A i-ii	1a; 3a-g; 4e; A.2.2; A.2.3; A.3.5	
Subarea IV: Differential and Integral Calculus			
0012 Understand principles of differential calculus.	a1 B; a2 A; a2 C; C2 A; e1 A; e1 B; e2 A; e2 B; h1 B; h3 A i-ii; h3 B ii-iii; h7 A i, ii	1a; 3a-g; 4e; A.5.1; A.5.5	
0013 Understand principles of integral calculus.	a1 B; a2 A; a2 C; C2 A; e1 A; e1 B; e2 A; e2 B; h1 B; h3 A i-ii; h3 B ii-iii; h7 A i, ii	1a; 3a-g; 4e; A.5.1; A.5.5	
Subarea V: Measurement and Geometry			

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0014 Understand principles and applications of measurement.	a1 B; a2 A; a2 C; C2 A; e1 A; e1 B; e2 A; e2 B	1a; 3a-g; 4e; g1 A i-ii; g1 B i, iii; g2 A i-iii; g2 B-C; g3 A i-iv; g3 B i; g3 C i-ii; i4 A iii, iv; i4 B; A.3.4; A.3.6; A.3.7	
0015 Understand Euclidean geometry.	a1 B; a2 A; a2 C; C2 A; e1 A; e1 B; e2 A; e2 B; i1-2; i4 A i-iv; i5 A i-ii; i5 C i; i6 C	1a; 3a-g; 4e; A.3.8; A.3.1; A.3.4; A.3.6; A.3.7	
0016 Understand coordinate and transformational geometry.	a1 B; a2 A; a2 C; C2 A; e1 A; e1 B; e2 A; e2 B; i2; i5 A i-ii; i5 B iv; i6 A	1a; 3a-g; 4e; A.3.2; A.3.3; A.3.6; A.3.9	
Subarea VI: Statistics, Probability, and Discrete Mathematics			
0017 Understand the process of collecting, organizing, and representing data.	a1 B; a2 A; a2 C; C2 A; e1 A; e1 B; e2 A; e2 B; h1 B; h5 B I; j1 A i-iii; j1 B; j2 A i-ii; j3 B; j3 C; j5 A i-iii; j5B; j6 A i-ii; j6 B; j7 A i-iii; j8 A i-v; j8 B i-ii; j8 C	1a; 3a-g; 4e; A.4.1; A.4.2; A.4.3	
0018 Understand probability and discrete mathematics.	a1 B; a2 A; a2 C; C2 A; e1 A; e1 B; e2 A; e2 B; h1 B-C; h4 ii; h5 B I; h5 C I; j4 A i-iii	1a; 3a-g; 4e; A.4.4; A.4.5; A.6.1; A.6.2; A.6.3	