MISSOURI EDUCATOR GATEWAY ASSESSMENTS

Field 023 Mathematics

Content Alignment Study

The Content Alignment Study below provides information about the alignment of knowledge and skills described in the competencies that make up the test framework for this licensure test with the state and national standards designated by the Department of Elementary and Secondary Education for this field. The table indicates those portions of the relevant state and/or national standards that are addressed —— in whole or in part — by each competency.

Test Competency	Missouri Department of Elementary and Secondary Education (Spring 2016) Mathematics Grade-Level Expectations Grades 6–12	National Council of Teachers of Mathematics (NCTM) (2000) Principles and Standards for School Mathematics
Numbers and Quantity		
0001 Understand real numbers and mathematical problem solving.	A1.NQ.A.1–2; A2.NQ.A.1–3	9–12.N.A.1–2, 4; 9–12.N.B.1; 9–12.N.C.1–2
0002 Understand complex numbers, vectors, and matrices.	A2.NQ.B.5–6	9–12.N.A.2–3; 9–12.N.B.2; 9–12.N.C.1
Patterns, Algebra, and Functions		
0003 Understand relations and functions.	A1.NQ.B.3d; A1.SSE.A.1; A1.REI.C.6; A1.APR.A.1–2; A1.IF.A.1a–b, 2, B.3–5, C.7–9; A1.LQE.B.4–6; A2.IF.A.1–2; A2.BF.A.1–2	9–12.A.A.1–4, 6; 9–12.A.B.1, 3–5; 9–12.A.D.1
0004 Understand linear, quadratic, and higher–order polynomial functions.	A1.SSE.A.2, 3a–b; A1.CED.A.1–4; A1.REI.A.1, 2a–c, B.3, 5, C.7–8; A1.IF.B.6; A1.LQE.A.1a, 3; A2.NQ.B.7; A2.APR.A.1–3, 5; A2.FM.A.1	9–12.A.A.3; 9–12.A.B.2, 5; 9–12.A.C.1–3
0005 Understand exponential and logarithmic functions.	A1.CED.A.2; A1.IF.B.6; A1.LQE.A.1b, 2–3; A2.SSE.A.1–4; A2.FM.A.1	9–12.A.A.3, 5; 9–12.A.B.2, 5; 9–12.A.C.1–3
0006 Understand rational, radical, absolute value, and piecewise defined functions.	A2.NQ.A.4; A2.REI.A.1–2; A2.APR.A.4	9–12.A.A.3, 5; 9–12.A.B.2, 5; 9–12.A.C.1–3

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Measurement and Geometry		
0007 Understand measurement principles and procedures.	A1.NQ.B.3a–c, 4–5; G.C.B.4–5; G.GMD.A.1–2; G.MG.A.1	9–12.M.A.1; 9–12.M.B.1–2, 4
0008 Understand Euclidean geometry in two and three dimensions.	G.CO.A.1, B.6–7, C.8–10; G.SRT.A.2–3, B.4, C.5–8; G.C.A.1–3; G.GMD.B.3–4; G.MG.A.1, 3	9–12.G.A.1–3; 9–12.G.D.1–5
0009 Understand coordinate and transformational geometry.	A1.BF.A.1; A2.BF.A.3; G.CO.A.2–5; G.SRT.A.1; G.GPE.A.1–2, B.3–6	9–12.G.B.1–2; 9–12.G.C.1–2
Trigonometry and Calculus		
0010 Understand trigonometric functions.	none	9–12.A.A.3, 5; 9–12.A.B.2, 5; 9–12.A.C.1–3; 9–12.G.A.4
0011 Understand differential calculus.	none	none
0012 Understand integral calculus.	none	none
Statistics and Probability		
0013 Understand principles and techniques of statistics.	A1.NQ.B.3d; A1.DS.A.1–3, 4a–b, 5a–b, 6–8; A2.DS.A.1–5, 7	9–12.D.A.1–5; 9–12.D.B.1–5; 9–12.D.C.1–4
0014 Understand principles and techniques of probability.	A2.DS.A.6, B.8; G.CP.A.1–8	9–12.N.B.3; 9–12.D.D.1–5