BIE Suggested Scope and Sequence Grade 7 Math Interim 1

Unit 1: Rational Number Operations (Foundation for the Year)

7.NS.A.1 – Add and subtract rational numbers (introduce with number lines, integer chips, and visual models)

7.NS.A.2 – Multiply and divide rational numbers (use real-world contexts, fraction/decimal connections)

7.NS.A.3 – Solve real-world and mathematical problems involving the four operations with rational numbers (culminating tasks, multi-step problems)

Developmental note: Begin with concrete/visual strategies for integers and fractions, then move to algorithms for fluency.

Unit 2: Expressions and Equations Foundations

7.EE.A.2 – Understand that rewriting expressions in different forms shows relationships and context (e.g., $2(x + 3)$ vs. $2x + 6$, or $d = rt$ in multiple forms)

7.EE.B.3 – Solve multi-step problems with rational numbers, using properties of operations to generate equivalent expressions

Developmental note: Anchor work in contexts (like discounts, taxes, measurement) to build meaning before symbolic manipulation.

Unit 3: Ratios, Rates, and Proportional Reasoning

7.RP.A.1 – Compute unit rates with fractions

7.RP.A.2 – Recognize and represent proportional relationships between quantities

7.RP.A.3 – Use proportional relationships to solve multi-step ratio and percent problems (e.g., simple interest, tax, markups, discounts, percent error)

Developmental note: Move from tables, graphs, and double number lines → equations → abstract proportional reasoning.

Unit 4: Geometry and Scale

7.G.A.1 – Solve problems involving scale drawings of geometric figures, including computing lengths and areas, and reproducing at a different scale

Developmental note: This unit relies heavily on proportional reasoning (from Unit 3), making it a natural application. Connect scale drawings to real-world contexts (maps, blueprints, models).