

Grade 7: Number Sense

Key Competency: student has a conceptual understanding of numbers and some of its representatives	Specific outcomes	Assessment and Evaluation	Effective Mathematical Thinking Questions:
Student orders fractions	<p>7. N. 7. Compare and order fractions, decimals (to thousandths) and integers, by using</p> <ul style="list-style-type: none"> • Benchmarks • Place value • Equivalent fractions and/or decimals 	<ul style="list-style-type: none"> • Performance Assessment Rubric • Student Self Reflections • Teacher Daily Observation Forms • Student Learning Goal Logs 	<ul style="list-style-type: none"> • Can the student order fractions using pictures? • Are students able to connect picture representations of fractions to symbols, and order them? • Can students order fractions in symbols?
Student orders decimals numbers	<p>7. N. 7. Compare and order fractions, decimals (to thousandths) and integers, by using</p> <ul style="list-style-type: none"> • Benchmarks • Place value • Equivalent fractions and/or decimals 	<ul style="list-style-type: none"> • Concept Overview Frames • Conferencing Portfolios/Folders • Anticipation Guides • Checklists (Met/Not Yet) • Frequency/Rating Scales • Student Work Exemplars/Anchors • Peer evaluations • Student Feedback • Student/Group Participation 	<ul style="list-style-type: none"> • Is the student able to order decimal numbers between 0-1, to two decimal places? • Can they order to decimals to two decimal places • Are they able to order decimal numbers to three decimal places?
Student understands that a given number may be represented in a variety of ways [Representations: pictorial, fraction, decimal, percent, ratio]	<p>7. N. 7. Demonstrate an understanding of the relationship between repeating decimals and terminating decimals and fractions</p>		<ul style="list-style-type: none"> • Are students able to represent a given number in one, two, or more than two other ways?

Grade 7: Number Skills

Key Competency: student solves mathematical problems using knowledge of number patterns and mental math strategies	Specific outcomes	Assessment and Evaluation	Effective Mathematical Thinking Questions:
<p>Student uses number patterns to solve mathematical problems</p>	<p>7. PR. 1 Demonstrate an understanding of oral and written patterns and their corresponding relations</p> <p>7. PR. 2 Construct a table of values from a relation, graph the table of values, and analyze the graph to draw conclusions to solve problems</p> <p>7. PR. 3 Demonstrate an understanding of preservation of equality by</p> <ul style="list-style-type: none"> • Modeling preservation of equality concretely, pictorially, and symbolically • Applying preservation of equality to solve equations 	<ul style="list-style-type: none"> • Performance Assessment Rubric • Student Self Reflections • Teacher Daily Observation Forms • Student Learning Goal Logs • Concept Overview Frames • Conferencing • Portfolios/Folders • Anticipation Guides • Checklists (Met/Not Yet) • Frequency/Rating Scales • Student Work Exemplars/Anchors • Peer evaluations • Student Feedback • Student/Group Participation 	<ul style="list-style-type: none"> • Can the student, in a problem solving context; develop a chart or table to record and extend patterns? [Using representations, recognize constructs, extend patterns, and use materials/pictures/numbers] • Does the student model patterns on graphs and describe (in everyday language) rules to reflect and extend patterns? • Is the student able to write an algebraic equation for number patterns to solve problems?
<p>Student uses a variety of strategies to calculate and explain a mental math problem</p>	<p>7. N. 2. Demonstrate an understanding of the addition, subtraction, multiplication, and division of decimals (for more than 1-digit divisors or 2-digit multipliers, the use of technology is expected)</p>		<ul style="list-style-type: none"> • Does the student use paper-pencil methods to make mental calculations? • Does the student solve using only one strategy to explain the reasoning? • Can students choose a variety of strategies to make mental calculations, adapt, and explain reasoning?