Main Criteria: Texas Essential Knowledge and Skills (TEKS)

Secondary Criteria: Pre-Algebra, Zeta

Subject: Mathematics

Grade: 7

Correlation Options: Show Correlated

Texas Essential Knowledge and Skills (TEKS)

Mathematics

Grade: **7** - Adopted: **2012**

TEKS	**111.27.**	**Grade 7, Adopted 2012.**
STUDENT EXPECTATION	**111.27.b. 1.**	**Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:**
GRADE LEVEL EXPECTATION	111.27.b. 1.B.	Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution. **Zeta** Zeta Level **Pre-Algebra** Pre-Algebra Level
GRADE LEVEL EXPECTATION	111.27.b. 1.C.	Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems. **Zeta** Zeta Level **Pre-Algebra** Pre-Algebra Level
GRADE LEVEL EXPECTATION	111.27.b. 1.D.	Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate. **Zeta** Zeta Level **Pre-Algebra** Pre-Algebra Level
GRADE LEVEL EXPECTATION	111.27.b. 1.E.	Create and use representations to organize, record, and communicate mathematical ideas. **Zeta** Zeta Level **Pre-Algebra** Pre-Algebra Level
GRADE LEVEL EXPECTATION	111.27.b. 1.F.	Analyze mathematical relationships to connect and communicate mathematical ideas. **Zeta** Zeta Level **Pre-Algebra** Pre-Algebra Level

GRADE LEVEL EXPECTATION	111.27.b.1.G.	Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication. **Zeta** Zeta Level **Pre-Algebra** Pre-Algebra Level
TEKS	**111.27.**	**Grade 7, Adopted 2012.**
STUDENT EXPECTATION	**111.27.b.4.**	**Proportionality. The student applies mathematical process standards to represent and solve problems involving proportional relationships. The student is expected to:**
GRADE LEVEL EXPECTATION	111.27.b.4.D.	Solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems. **Pre-Algebra** Lesson 19: Ratio and Proportion **Zeta** Lesson 11: Finding a Percentage Lesson 12: Finding a Percentage > 100%; Word Problems Lesson 13: Reading Percentages in a Pie Graph
TEKS	**111.27.**	**Grade 7, Adopted 2012.**
STUDENT EXPECTATION	**111.27.b.8.**	**Expressions, equations, and relationships. The student applies mathematical process standards to develop geometric relationships with volume. The student is expected to:**
GRADE LEVEL EXPECTATION	111.27.b.8.C.	Use models to determine the approximate formulas for the circumference and area of a circle and connect the models to the actual formulas. **Zeta** Lesson 16: Computing Area and Circumference of a Circle **Pre-Algebra** Lesson 24: Volume of a Cylinder
TEKS	**111.27.**	**Grade 7, Adopted 2012.**
STUDENT EXPECTATION	**111.27.b.9.**	**Expressions, equations, and relationships. The student applies mathematical process standards to solve geometric problems. The student is expected to:**
GRADE LEVEL EXPECTATION	111.27.b.9.B.	Determine the circumference and area of circles. **Zeta** Lesson 16: Computing Area and Circumference of a Circle
GRADE LEVEL EXPECTATION	111.27.b.9.D.	Solve problems involving the lateral and total surface area of a rectangular prism, rectangular pyramid, triangular prism, and triangular pyramid by determining the area of the shape's net. **Pre-Algebra** Lesson 15: Surface Area of Solids
TEKS	**111.27.**	**Grade 7, Adopted 2012.**
STUDENT EXPECTATION	**111.27.b.11.**	**Expressions, equations, and relationships. The student applies mathematical process standards to solve one-variable equations and inequalities. The student is expected to:**

GRADE LEVEL EXPECTATION	111.27.b. 11.A.	Model and solve one-variable, two-step equations and inequalities. **Zeta** Lesson 22: More Solving for an Unknown **Pre-Algebra** Lesson 09: Solve for an Unknown with Additive Inverse
Grade: **7** - Adopted: **2025**		
TEKS	**111.30.**	**111.30. Grade 7, Middle School Advanced Mathematics, Adopted 2025.**
STUDENT EXPECTATION	**111.30.c.**	**Knowledge and skills.**
GRADE LEVEL EXPECTATION	**111.30.c. 1.**	**Mathematical process standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:**
INDICATOR	111.30.c. 1.B.	use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution; **Zeta** Zeta Level **Pre-Algebra** Pre-Algebra Level
INDICATOR	111.30.c. 1.C.	select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems; **Zeta** Zeta Level **Pre-Algebra** Pre-Algebra Level
INDICATOR	111.30.c. 1.D.	communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate; **Zeta** Zeta Level **Pre-Algebra** Pre-Algebra Level
INDICATOR	111.30.c. 1.E.	create and use representations to organize, record, and communicate mathematical ideas; **Zeta** Zeta Level **Pre-Algebra** Pre-Algebra Level
INDICATOR	111.30.c. 1.F.	analyze mathematical relationships to connect and communicate mathematical ideas; and **Zeta** Zeta Level **Pre-Algebra** Pre-Algebra Level

INDICATOR	111.30.c.1.G.	display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication. **Zeta** Zeta Level **Pre-Algebra** Pre-Algebra Level
TEKS	**111.30.**	**111.30. Grade 7, Middle School Advanced Mathematics, Adopted 2025.**
STUDENT EXPECTATION	**111.30.c.**	**Knowledge and skills.**
GRADE LEVEL EXPECTATION	**111.30.c.2.**	**Numeracy--foundations of real numbers. The student applies mathematical process standards to represent and use real numbers in a variety of forms. The student is expected to:**
INDICATOR	111.30.c.2.C.	convert between standard decimal notation and scientific notation; and **Zeta** Lesson 01: Exponents; Word Problem Tips
TEKS	**111.30.**	**111.30. Grade 7, Middle School Advanced Mathematics, Adopted 2025.**
STUDENT EXPECTATION	**111.30.c.**	**Knowledge and skills.**
GRADE LEVEL EXPECTATION	**111.30.c.4.**	**Numeracy--applications of percents. The student applies mathematical process standards to represent and solve problems involving percents as proportional relationships. The student is expected to:**
INDICATOR	111.30.c.4.A.	solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems; **Pre-Algebra** Lesson 19: Ratio and Proportion **Zeta** Lesson 11: Finding a Percentage Lesson 12: Finding a Percentage > 100%; Word Problems Lesson 13: Reading Percentages in a Pie Graph
TEKS	**111.30.**	**111.30. Grade 7, Middle School Advanced Mathematics, Adopted 2025.**
STUDENT EXPECTATION	**111.30.c.**	**Knowledge and skills.**
GRADE LEVEL EXPECTATION	**111.30.c.7.**	**One-variable expressions, equations, and relationships--applications of one-variable relationships. The student applies mathematical process standards to use one-variable equations or inequalities in problem situations. The student is expected to:**
INDICATOR	111.30.c.7.B.	model and solve one-variable, two-step inequalities; **Zeta** Lesson 22: More Solving for an Unknown **Pre-Algebra** Lesson 09: Solve for an Unknown with Additive Inverse
TEKS	**111.30.**	**111.30. Grade 7, Middle School Advanced Mathematics, Adopted 2025.**
STUDENT EXPECTATION	**111.30.c.**	**Knowledge and skills.**

GRADE LEVEL EXPECTATION	**111.30.c.10.**	**Geometric expressions, equations, and relationships--foundations of geometric concepts. The student applies mathematical process standards to develop geometric relationships and solve problems. The student is expected to:**
INDICATOR	111.30.c.10.A.	use models to determine the approximate formulas for the circumference and area of a circle and connect the models to the actual formulas; **Zeta** Lesson 16: Computing Area and Circumference of a Circle **Pre-Algebra** Lesson 24: Volume of a Cylinder
INDICATOR	111.30.c.10.B.	solve problems involving the lateral and total surface area of a rectangular prism, rectangular pyramid, triangular prism, and triangular pyramid by determining the area of the shape's net; **Pre-Algebra** Lesson 15: Surface Area of Solids
INDICATOR	111.30.c.10.G.	use models and diagrams to explain the Pythagorean theorem; and **Pre-Algebra** Lesson 10: Pythagorean Theorem
TEKS	**111.30.**	**111.30. Grade 7, Middle School Advanced Mathematics, Adopted 2025.**
STUDENT EXPECTATION	**111.30.c.**	**Knowledge and skills.**
GRADE LEVEL EXPECTATION	**111.30.c.11.**	**Geometric expressions, equations, and relationships--applications of geometric concepts. The student applies mathematical process standards to solve geometric problems. The student is expected to:**
INDICATOR	111.30.c.11.A.	determine the circumference and area of circles; **Zeta** Lesson 16: Computing Area and Circumference of a Circle
INDICATOR	111.30.c.11.C.	use previous knowledge of surface area to make connections to the formulas for lateral and total surface area and determine solutions for problems involving rectangular prisms, triangular prisms, and cylinders; **Pre-Algebra** Lesson 15: Surface Area of Solids
INDICATOR	111.30.c.11.F.	use the Pythagorean theorem and its converse to solve problems; and **Pre-Algebra** Lesson 10: Pythagorean Theorem
INDICATOR	111.30.c.11.G.	determine the distance between two points on a coordinate plane using the Pythagorean theorem. **Pre-Algebra** Lesson 10: Pythagorean Theorem