



Alignment of Texas State Standards with Solve It!

STANDARD	DESCRIPTION	ALIGNMENT WITH <i>Solve It!</i>
MATHEMATICAL PROCESS STANDARD A	Apply mathematics to problem solving arising in everyday life, society, and the workplace.	Solve It! is an instructional program designed to improve the mathematical problem-solving skills of students in middle and secondary school grades. Mathematical problem-solving skills are essential for success in school, on the job, and in the community. The purpose of Solve It! is to teach students to be successful problem solvers.
MATHEMATICAL PROCESS STANDARD B	Use a problem-solving model that incorporates analyzing, giving information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.	<ul style="list-style-type: none">• Paraphrasing (“analyze given information,” “represent linear relationships using verbal descriptions...”)• Hypothesizing (“formulating a plan or strategy, determining a solution, justifying the solution”; “determining solutions using experimental data for simple and compound events”)• Metacognition (“evaluating the problem-solving process and the reasonableness of the solution”)• Checking (“evaluating the problem-solving process and the reasonableness of the solution”)• Estimation (“estimate to determine solutions to mathematical and real-world problems involving addition, subtraction, multiplication, or division”; “make predictions and determine solutions using experimental data for simple and compound events”)• Computing (“develop and use strategies and methods for positive number computations in order to solve problems with efficiency and accuracy”)
MATHEMATICAL PROCESS STANDARD C	Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate along with techniques that include mental math, estimation, and number sense as appropriate to solve problems.	<ul style="list-style-type: none">• Visualizing (“classify whole numbers, integers, and rational numbers using a visual representation”)• Estimation (“determine, with and without computation, whether a quantity is increased or decreased when multiplied by a fraction”)

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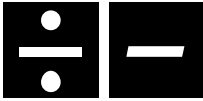


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MATHEMATICAL PROCESS STANDARD D	Communicate mathematical ideas, reasoning, and their implications using multiple representations that include symbols, diagrams, graphs, and language as appropriate.	<ul style="list-style-type: none">• Visualizing (“using multiple representations, including symbols, diagrams, graphs”; “using the graphical representation of numeric data to describe the center, spread, and shape of the data distribution”)• Paraphrasing (“using multiple representations including... language”)
MATHEMATICAL PROCESS STANDARD E	Create and use representations to organize, record, and communicate mathematical ideas.	<ul style="list-style-type: none">• Visualizing (“extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers”; “represent multiplication of decimals with products to the hundredths using objects and pictorial models”; “represent a give situation using verbal descriptions, tables, graphs...”)• Hypothesizing (“to organize mathematical ideas”)
MATHEMATICAL PROCESS STANDARD F	Analyze mathematical relationships to connect and communicate mathematical ideas.	<ul style="list-style-type: none">• Hypothesizing (“use mathematical relationships to generate solutions and make connections and predictions”)• Visualizing (“use concrete objects and pictorial models to develop the formulas for the volume of a rectangular prism”; “extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of real numbers”)• Concepts of Operations (“apply and extend previous understandings of operations to solve problems”; “use the order of operations”; “generate equivalent expressions using the properties of operations: inverse, identity, commutative, associative, and distributive properties”)• Estimation (“use mathematical relationships to generate solutions and make connections and predictions”)

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MATHEMATICAL PROCESS STANDARD G	Display, explain, and justify mathematical ideas and arguments using precise mathematical languages in written or oral communication.	<ul style="list-style-type: none">• Visualizing (“represent categorical data with bar graphs or frequency tables and numerical data”)• Estimation (“round decimals to tenths or hundredths”)• Hypothesizing (“display, explain, and justify mathematical ideas and arguments using precise mathematical languages in written”)• Computing (“display...mathematical ideas and arguments using precise mathematical languages in written”)• Checking (“evaluate arguments”)

