

# THE **ThinkTank**

Computation and Number Sense

**CORRELATION TO TEKS (TEXAS ESSENTIAL KNOWLEDGE AND SKILLS FOR MATHEMATICS)**

**Grade 6**

**HEADQUARTERS**

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EDUCATION

# The Think Tank Grade 6

## CORRELATION TO TEKS (TEXAS ESSENTIAL KNOWLEDGE AND SKILLS FOR MATHEMATICS)

		Expectation: The student is expected to...	Pages
Number, Operation, and Quantitative Reasoning	(6.1) The student represents and uses rational numbers in a variety of equivalent forms.	(A) compare and order non-negative rational numbers.	Speedy Starters: 3, 9, 12, 14, 16, 17 Brain Builders: 3, 5, 6, 10, 15 Mental Teasers: 2, 3, 6, 8, 11, 16, 19 Mind Benders: 3, 9, 10, 13, 20 Head Sharpeners: 1, 6, 8, 9, 13 Pace Setters: 6, 7, 8, 10, 15 Fast Figurers: 2, 7, 12, 14, 17 Quick Thinkers: 6, 7, 10, 11, 19 Number Jugglers: 6, 9, 13, 16 Wise Workers: 2, 6, 7, 11, 12 Super Solvers: 3, 11, 12 Grand Masters: 1, 4, 8, 9, 18, 19
		(B) generate equivalent forms of rational numbers including whole numbers, fractions, and decimals.	Speedy Starters: 14 Mental Teasers: 6 Head Sharpeners: 6 Pace Setters: 4 Fast Figurers: 7 Quick Thinkers: 10
		(E) identify factors and multiples including common factors and common multiples.	Speedy Starters: 1, 8, 11 Mental Teasers: 1, 15 Mind Benders: 5 Head Sharpeners: 17 Pace Setters: 13, 14 Fast Figurers: 11 Quick Thinkers: 2 Wise Workers: 17 Super Solvers: 4

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	Expectation: The student is expected to...	Pages
Number, Operation, and Quantitative Reasoning	(6.2) The student adds, subtracts, multiplies, and divides to solve problems and justify solutions.	(A) model addition and subtraction situations involving fractions with objects, pictures, words, and numbers.  (B) use addition and subtraction to solve problems involving fractions and decimals.
		Fast Figurers: 18 Number Jugglers: 19 Super Solvers: 18 Grand Masters: 10
		Speedy Starters: 2, 5, 6, 9, 12, 13, 15, 18, 19, 20 Brain Builders: 2, 6, 8, 9, 11, 12, 14, 18, 20 Mental Teasers: 4, 8, 9, 10, 14, 18, 20 Mind Benders: 3, 4, 6, 7, 8, 13, 16, 18, 19, 20 Head Sharpeners: 5, 8, 12, 13, 14, 19, 20 Pace Setters: 3, 6, 7, 9, 11, 12, 16, 18, 19 Fast Figurers: 2, 4, 8, 15, 17, 18, 19, 20 Quick Thinkers: 1, 4, 5, 6, 8, 11, 12, 14, 16, 17, 19, 20 Number Jugglers: 2, 4, 7, 8, 9, 10, 11, 12, 15, 16, 19 Wise Workers: 1, 5, 6, 12, 13, 14, 15, 16, 18 Super Solvers: 2, 8, 13, 16, 17, 18, 19, 20 Grand Masters: 3, 9, 10, 11, 12, 13, 14, 15, 17, 20
		(C) use multiplication and division of whole numbers to solve problems including situations involving equivalent ratios and rates.
		Speedy Starters: 3, 4, 5, 8, 10, 11, 13 Brain Builders: 4, 7, 14, 15, 16 Mental Teasers: 1, 4, 5, 13, 19 Mind Benders: 1, 3, 5, 8, 12, 14, 15, 17 Head Sharpeners: 4, 9, 11, 16 Pace Setters: 4, 7, 10, 13, 14, 17, 20 Fast Figurers: 3, 4, 5, 9, 10, 16, 18, 19 Quick Thinkers: 2, 3, 4, 5, 15, 19 Number Jugglers: 1, 2, 3, 7, 11, 17, 19, 20 Wise Workers: 2, 4, 7, 8, 9, 10, 12, 14, 16, 17, 20 Super Solvers: 1, 2, 3, 4, 8, 9, 11, 13, 14, 16, 18 Grand Masters: 1, 2, 3, 4, 6, 7, 10, 16, 18
	(D) estimate and round to approximate reasonable results and to solve problems where exact answers are not required.	Speedy Starters: 3 Mental Teasers: 7, 19 Mind Benders: 3, 9, 15 Pace Setters: 7 Quick Thinkers: 4, 13, 19 Number Jugglers: 11 Wise Workers: 3, 12, 14 Super Solvers: 6, 8
Patterns, Relationships, and Algebraic Thinking	(6.3) The student solves problems involving proportional relationships.	(B) represent ratios and percents with concrete models, fractions, and decimals.
		Mental Teasers: 7 Head Sharpeners: 15 Pace Setters: 1 Quick Thinkers: 13 Wise Workers: 3 Super Solvers: 6

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		Expectation: The student is expected to...	Pages
Patterns, Relationships, and Algebraic Thinking	(6.4) The student uses letters as variables in mathematical expressions to describe how one quantity changes when a related quantity changes.	(A) use tables and symbols to represent and describe proportional and other relationships involving conversions, sequences, perimeter, area, etc.	Speedy Starters: 8, 10, 11 Mental Teasers: 1, 12 Mind Benders: 5 Head Sharpeners: 3 Pace Setters: 13, 14 Fast Figurers: 1 Quick Thinkers: 2 Number Jugglers: 3, 5 Wise Workers: 17 Super Solvers: 4, 15 Grand Masters: 4, 6
		(B) generate formulas to represent relationships involving perimeter, area, volume of a rectangular prism, etc., from a table of data.	Speedy Starters: 1 Mental Teasers: 15 Mind Benders: 1 Head Sharpeners: 17 Fast Figurers: 11 Quick Thinkers: 15
	(6.5) The student uses letters to represent an unknown in an equation.	The student is expected to formulate an equation from a problem situation.	Speedy Starters: 7, 15, 20 Brain Builders: 9, 20 Mental Teasers: 4, 18, 20 Mind Benders: 2, 6, 11, 16 Head Sharpeners: 2, 5, 11, 13, 19 Pace Setters: 2, 7, 12, 20 Fast Figurers: 4, 6, 8, 9, 17, 20 Quick Thinkers: 8, 12, 16, 19, 20 Number Jugglers: 2, 10, 16, 19, 20 Wise Workers: 9, 14, 15 Super Solvers: 8, 10, 11, 13, 17, 19, 20 Grand Masters: 1, 5, 12, 14
Measurement	(6.8) The student solves application problems involving estimation and measurement of length, area, time, temperature, capacity, weight, and angles.	(A) estimate measurements and evaluate reasonableness of results.	Brain Builders: 19 Mental Teasers: 17 Head Sharpeners: 10 Quick Thinkers: 18
		(B) select and use appropriate units, tools, or formulas to measure and to solve problems involving length (including perimeter and circumference), area, time, temperature, capacity, and weight.	Mind Benders: 1
		(D) convert measures within the same measurement system (customary and metric) based on relationships between units.	Brain Builders: 7 Pace Setters: 4 Super Solvers: 5

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		Expectation: The student is expected to...	Pages
Probability and Statistics	(6.10) The student uses statistical representations to analyze data.	(C) sketch circle graphs to display data	Quick Thinkers: 9
Underlying Processes and Mathematical Tools	(6.11) The student applies Grade 6 mathematics to solve problems connected to everyday experiences, investigations in other disciplines, and activities in and outside of school.	(A) identify and apply mathematics to everyday experiences, to activities in and outside of school, with other disciplines, and with other mathematical topics.	Speedy Starters: 7 Brain Builders: 12, 13 Mind Benders: 2, 4, 15 Head Sharpeners: 5 Pace Setters: 5, 9 Fast Figurers: 3, 6 Quick Thinkers: 16, 17 Number Jugglers: 18 Wise Workers: 1, 13, 16, 18 Super Solvers: 2, 10 Grand Masters: 3, 5, 11, 17
		(B) use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness.	Brain Builders: 11 Head Sharpeners: 5 Quick Thinkers: 16 Number Jugglers: 11
		(C) select or develop an appropriate problem-solving strategy from a variety of different types, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem.	Speedy Starters: 6 Brain Builders: 11, 12, 15, 17 Mind Benders: 1, 11 Head Sharpeners: 5, 13 Pace Setters: 2 Fast Figurers: 17 Quick Thinkers: 4, 15, 16 Number Jugglers: 11, 15 Wise Workers: 1, 2, 13, 16, 18 Super Solvers: 2, 11, 16 Grand Masters: 1, 3, 11, 17, 20
		(D) select tools such as real objects, manipulatives, paper/pencil, and technology or techniques such as mental math, estimation, and number sense to solve problems.	Speedy Starters: 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 15, 18, 19, 20 Brain Builders: 2, 4, 6, 8, 9, 11, 12, 14, 15, 16, 17, 18, 20 Mental Teasers: 1, 4, 5, 8, 9, 10, 12, 13, 14, 18, 19, 20 Mind Benders: 1, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 Head Sharpeners: 2, 3, 4, 8, 9, 11, 12, 13, 14, 18, 19, 20 Pace Setters: 2, 3, 6, 7, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20 Fast Figurers: 1, 3, 4, 5, 8, 9, 10, 13, 15, 16, 17, 19, 20 Quick Thinkers: 1, 2, 3, 4, 5, 8, 11, 12, 14, 15, 17, 19, 20 Number Jugglers: 1, 2, 3, 4, 5, 7, 8, 10, 11, 12, 14, 15, 16, 17, 20 Wise Workers: 1, 2, 4, 5, 6, 8, 9, 12, 13, 14, 15, 16, 17, 18, 20 Super Solvers: 2, 4, 7, 8, 11, 13, 14, 15, 16, 17, 19, 20 Grand Masters: 1, 2, 3, 4, 6, 9, 11, 12, 13, 14, 15, 16, 17, 20

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		Expectation: The student is expected to...	Pages
Underlying Processes and Mathematical Tools	(6.12) The student communicates about Grade 6 mathematics through informal and mathematical language, representations, and models.	(A) communicate mathematical ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic mathematical models.	Speedy Starters: 2, 6, 7, 10, 13, 15, 18 Brain Builders: 1, 2, 4, 8, 9, 11, 12, 14, 15, 17, 20 Mental Teasers: 4, 9, 10, 14, 20 Mind Benders: 2, 4, 7, 8, 9, 11, 12, 16, 18, 19 Head Sharpeners: 2, 5, 7, 11, 13, 14, 18 Pace Setters: 2, 3, 9, 10, 11, 12, 16, 17, 19 Fast Figurers: 4, 6, 8, 13, 15, 16, 17, 19, 20 Quick Thinkers: 3, 4, 5, 8, 9, 12, 14, 16, 17 Number Jugglers: 1, 2, 7, 8, 10, 11, 14, 15, 17, 18, 20 Wise Workers: 1, 2, 4, 9, 13, 16, 18, 19, 20 Super Solvers: 1, 2, 7, 10, 11, 13, 16, 19, 20 Grand Masters: 1, 3, 4, 5, 11, 12, 15, 16, 17, 20
		(B) evaluate the effectiveness of different representations to communicate ideas.	Speedy Starters: 13 Mind Benders: 8 Pace Setters: 12, 17 Fast Figurers: 18 Quick Thinkers: 3 Number Jugglers: 1, 10 Wise Workers: 20 Super Solvers: 20 Grand Masters: 16
Underlying Processes and Mathematical Tools	(6.13) The student uses logical reasoning to make conjectures and verify conclusions.	(A) make conjectures from patterns or sets of examples and nonexamples.	Speedy Starters: 1, 4, 5, 9, 10, 11 Brain Builders: 4, 6, 11, 16, 17 Mental Teasers: 1, 5, 12, 15, 16 Mind Benders: 1, 9, 11, 12, 13, 17 Head Sharpeners: 2, 3, 4, 8, 17, 18, 20 Pace Setters: 2, 6, 7, 14, 18 Fast Figurers: 1, 5, 11, 13, 16 Quick Thinkers: 1, 4, 9, 11, 15, 19 Number Jugglers: 3, 5, 6, 11, 12, 14, 16, 20 Wise Workers: 6, 8, 10, 14 Super Solvers: 4, 7, 8, 9, 14, 15, 16 Grand Masters: 4, 7, 8, 9, 13
		(B) validate his/her conclusions using mathematical properties and relationships.	Speedy Starters: 1, 10, 15, 16 Brain Builders: 2, 4, 8, 11, 13, 15, 17 Mental Teasers: 1, 3, 4, 9, 12, 15 Mind Benders: 7, 9, 11, 12, 16, 18 Head Sharpeners: 1, 2, 3, 5, 13, 14, 17, 18 Pace Setters: 2, 3, 5, 7, 10, 14, 19 Fast Figurers: 1, 4, 11, 13, 16, 17, 20 Quick Thinkers: 4, 12, 14, 16, 19 Number Jugglers: 5, 8, 11, 13, 14, 17, 20 Wise Workers: 2, 9, 14 Super Solvers: 7, 8, 11, 12, 13, 15, 16, 19 Grand Masters: 1, 4, 12, 15, 19