

## TTUISD - TEKS Tracker

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**TTU Course: MATH 5B - Mathematics, Grade 5 (v.3.0), Second Semester**  
**TEKS: §111.17. Grade 5, Amended 2006.**

TEKS Requirement (Elementary)	Sem. B	Lesson & Assignment Number	Textbook Chapter/Page #	Bloom's Taxonomy
<b>§111.17. Mathematics, Grade 5.</b>				
(a) Introduction.				
(1) Within a well-balanced mathematics curriculum, the primary focal points at Grade 5 are comparing and contrasting lengths, areas, and volumes of two- or three-dimensional geometric figures; representing and interpreting data in graphs, charts, and tables; and applying whole number operations in a variety of contexts.				
(2) Throughout mathematics in Grades 3-5, students build a foundation of basic understandings in number, operation, and quantitative reasoning; patterns, relationships, and algebraic thinking; geometry and spatial reasoning; measurement; and probability and statistics. Students use algorithms for addition, subtraction, multiplication, and division as generalizations connected to concrete experiences; and they concretely develop basic concepts of fractions and decimals. Students use appropriate language and organizational structures such as tables and charts to represent and communicate relationships, make predictions, and solve problems. Students select and use formal language to describe their reasoning as they identify, compare, and classify two- or three-dimensional geometric figures; and they use numbers, standard units, and measurement tools to describe and compare objects, make estimates, and solve application problems. Students organize data, choose an appropriate method to display the data, and interpret the data to make decisions and predictions and solve problems.				
(3) Throughout mathematics in Grades 3-5, students develop numerical fluency with conceptual understanding and computational accuracy. Students in Grades 3-5 use knowledge of the base-ten place value system to compose and decompose numbers in order to solve problems requiring precision, estimation, and reasonableness. By the end of Grade 5, students know basic addition, subtraction, multiplication, and division facts and are using them to work flexibly, efficiently, and accurately with numbers during addition, subtraction, multiplication, and division computation.				
(4) Problem solving, language and communication, connections within and outside mathematics, and formal and informal reasoning underlie all content areas in mathematics. Throughout mathematics in Grades 3-5, students use these processes together with technology and other mathematical tools such as manipulative materials to develop conceptual understanding and solve meaningful problems as they do mathematics.				
(b) Knowledge and skills.				
(1) Number, operation, and quantitative reasoning. The student uses place value to represent whole numbers and decimals. The student is expected to:				
(A) use place value to read, write, compare, and order whole numbers through the 999,999,999,999; and	<b>B</b>			Apply
(B) use place value to read, write, compare, and order decimals through the thousandths place.	<b>B</b>			Apply
(2) Number, operation, and quantitative reasoning. The student uses fractions in problem-solving situations. The student is expected to:				
(A) generate a fraction equivalent to a given fraction such as 1/2 and 3/6 or 4/12 and 1/3;	<b>B</b>	82, 83, 84, 88	378-380 382-385 387-389 400-403	Create
(B) generate a mixed number equivalent to a given improper fraction or generate an improper fraction equivalent to a given mixed number;	<b>B</b>	76, 77, 83, 92, 95, 107	346-349 352-355 382-385 424-427 434-437 486-489	Create
(C) compare two fractional quantities in problem-solving situations using a variety of methods, including common denominators; and	<b>B</b>	76, 77, 81, 88, 92, 103	346-349 352-355 374-377 398-399 400-403 424-427 470-473	Evaluate
(D) use models to relate decimals to fractions that name tenths, hundredths, and thousandths.	<b>B</b>	84, 86, 95, 101, 113	387-389 392-395 434-437 463-466 513-516	Evaluate
(3) Number, operation, and quantitative reasoning. The student adds, subtracts, multiplies, and divides to solve meaningful problems. The student is expected to:				
(A) use addition and subtraction to solve problems involving whole numbers and decimals;	<b>B</b>			Apply
(B) use multiplication to solve problems involving whole numbers (no more than three digits times two digits without technology);	<b>B</b>	77	352-355	Apply

(C) use division to solve problems involving whole numbers (no more than two-digit divisors and three-digit dividends without technology), including interpreting the remainder within a given context;		<b>B</b>	83, 95	382-385 434-437	Apply
(D) identify common factors of a set of whole numbers; and		<b>B</b>	80, 81, 83	369-371 374-377 382-385	Analyze
(E) model situations using addition and/or subtraction involving fractions with like denominators using concrete objects, pictures, words, and numbers.		<b>B</b>	91, 92, 95, 96, 98, 101, 107, 113	417-418 419-421 422-423 424-427 434-437 438-440 444-447 463-466 486-489 513-516	Analyze
(4) Number, operation, and quantitative reasoning. The student estimates to determine reasonable results. The student is expected to use strategies, including rounding and compatible numbers to estimate solutions to addition, subtraction, multiplication, and division problems.		<b>B</b>	77, 94, 95, 103, 113	352-355 430-432 434-437 470-473 513-516	Evaluate
(5) Patterns, relationships, and algebraic thinking. The student makes generalizations based on observed patterns and relationships. The student is expected to:					
(A) describe the relationship between sets of data in graphic organizers such as lists, tables, charts, and diagrams; and		<b>B</b>	80, 132	369-371 593	Create
(B) identify prime and composite numbers using concrete objects, pictorial models, and patterns in factor pairs.		<b>B</b>	81, 83, 105, 136	372-373 374-377 382-385 478-481 615-619	Analyze
(6) Patterns, relationships, and algebraic thinking. The student describes relationships mathematically. The student is expected to select from and use diagrams and equations such as $y = 5 + 3$ to represent meaningful problem situations.		<b>B</b>	76, 95, 122	346-349 434-437 556-560	Evaluate
(7) Geometry and spatial reasoning. The student generates geometric definitions using critical attributes. The student is expected to identify essential attributes including parallel, perpendicular, and congruent parts of two- and three-dimensional geometric figures.		<b>B</b>	119, 121, 122, 126, 135, 137	543-546 550-551 552-555 556-560 564-567 608-611 615-619	Create
(8) Geometry and spatial reasoning. The student models transformations. The student is expected to:					
(A) sketch the results of translations, rotations, and reflections on a Quadrant I coordinate grid; and		<b>B</b>	126, 127, 128	564-567 568-571 572-576	Create
(B) identify the transformation that generates one figure from the other when given two congruent figures on a Quadrant I coordinate grid.		<b>B</b>	129, 133	577-579 598-601	Analyze
(9) Geometry and spatial reasoning. The student recognizes the connection between ordered pairs of numbers and locations of points on a plane. The student is expected to locate and name points on a coordinate grid using ordered pairs of whole numbers.		<b>B</b>			Analyze
(10) Measurement. The student applies measurement concepts involving length (including perimeter), area, capacity/volume, and weight/mass to solve problems. The student is expected to:					
(A) perform simple conversions within the same measurement system (SI (metric) or customary);		<b>B</b>	101, 103, 104, 105, 107, 112, 113, 115, 115, 122, 126, 128, 136, 143	463-466 470-473 474-476 478-481 486-489 503-507 510-512 513-516 523-527 556-560 564-567 572-576 614 646-650	Apply
(B) connect models for perimeter, area, and volume with their respective formulas; and		<b>B</b>	132, 133, 136, 137, 138, 143	593-594 596-597 601, 614 615-619 622-625 646-650	Apply
(C) select and use appropriate units and formulas to measure length, perimeter, area, and volume.		<b>B</b>	132, 133, 134, 143	593 594-597 598- 601 602-605 646- 650	Apply
(11) Measurement. The student applies measurement concepts. The student measures time and temperature (in degrees Fahrenheit and Celsius). The student is expected to:					
(A) solve problems involving changes in temperature; and		<b>B</b>	114, 115, 116, 126, 128, 133	519-521 523-527 530-531 564-567 572-576 598-601	Apply
(B) solve problems involving elapsed time.		<b>B</b>	107, 113, 126	486-489 513-516 564-567	Apply
(12) Probability and statistics. The student describes and predicts the results of a probability experiment. The student is expected to:					
(A) use fractions to describe the results of an experiment;		<b>B</b>	143, 145	646-650 651 655- 658	Evaluate
(B) use experimental results to make predictions; and		<b>B</b>	143	644-645	Evaluate
(C) list all possible outcomes of a probability experiment such as tossing a coin.		<b>B</b>	142, 143, 144, 145	639-641 646-650 652-653 655-658	Evaluate

(13) Probability and statistics. The student solves problems by collecting, organizing, displaying, and interpreting sets of data. The student is expected to:					
(A) use tables of related number pairs to make line graphs;					Create
(B) describe characteristics of data presented in tables and graphs including median, mode, and range; and	<b>B</b>	83	382-385		Evaluate
(C) graph a given set of data using an appropriate graphical representation such as a picture or line graph.	<b>B</b>	77	352-355		Create
(14) Underlying processes and mathematical tools. The student applies Grade 5 mathematics to solve problems connected to everyday experiences and activities in and outside of school. The student is expected to:					
(A) identify the mathematics in everyday situations;	<b>B</b>	82, 83, 84, 86, 91, 92, 93, 94, 85, 96, 97, 101, 104, 113, 114, 115, 129, 132, 137, 143	378-380 382-385 387-389 392-395 419-421 424-427 428-429 430-432 434-437 438-440 444-447 463-466 474-476 513-516 519-521 523-527 577-579 594-597 615-619 646-650		Understand
(B) solve problems that incorporate understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness;	<b>B</b>	142, 144, 145, 146	639-641 652-653 655-658 660-661		Create
(C) select or develop an appropriate problem-solving plan or strategy, 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; and	<b>B</b>	78, 85, 86, 87, 93, 97, 102, 105, 111, 116, 120, 123, 126, 136, 139, 146	356-357 390-391 392-395 396-397 428-429 442-443 468-469 482-483 508-509 530-531 548-549 562-563 564-567 612-613 626-627 660-661		Create
(D) use tools such as real objects, manipulatives, and technology to solve problems.	<b>B</b>	88, 101, 115, 143	398-399 400-403 461-462 522 651		Apply
(15) Underlying processes and mathematical tools. The student communicates about Grade 5 mathematics using informal language. The student is expected to:					
(A) explain and record observations using objects, words, pictures, numbers, and technology; and	<b>B</b>	76, 81, 82, 83, 84, 88, 91, 92, 94, 95, 96, 98, 101, 104, 105, 106, 107, 110, 112, 114, 115, 119, 121, 122, 128, 132, 137, 138, 142, 143, 145	346-349 372-373 374-377 378-380 382-385 387-389 398-399 400-403 417-418 419-421 422-423 424-427 430-432 434-437 438-440 444-447 461-462 463-466 501-502 474-476 478-481 482-483 486-489 519-521 510-512 522 523- 527 543-546 552- 555 556-560 572- 576 594-597 598- 601		Create
(B) relate informal language to mathematical language and symbols.	<b>B</b>	138, 142	622-625 639-641		Analyze
(16) Underlying processes and mathematical tools. The student uses logical reasoning. The student is expected to:					
(A) make generalizations from patterns or sets of examples and nonexamples; and	<b>B</b>	83, 86, 91, 92, 121, 122, 132	382-385 392-395 417-418 422-423 552-555 556-560 594-597		Create

(B) justify why an answer is reasonable and explain the solution process.		<b>B</b>	76, 77, 80, 81, 82, 91, 93, 94, 105, 110, 111, 112, 113, 122, 127, 132, 137, 138, 142, 143, 145	346-349 352-355 369-371 374-377 378-380 419-421 428-429 430-432 478-481 501-502 508-509 510-512 513-516 556-560 568-571 594-597 615-619 622-625 639-641 644-645 646-650 655-658	Evaluate
<i>Source: The provisions of this §111.17 adopted to be effective September 1, 1998, 22 TexReg 7623; amended to be effective August 1, 2006, 30 TexReg 7471.</i>					