

### 8th Grade Mathematics TAKS Matrix

8th Grade TAKS test

TEKS	Student Expectation	2003	2004	2005	Priority
<b>OBJECTIVE 1</b>	<b>Number Operations, and Quantitative Reasoning</b>	<b>10 Total</b>	<b>10 Total</b>	<b>10 Total</b>	<b>10 Total</b>
8.1A	compare and order rational numbers in various forms including integers, percents, and positive and negative fractions and decimals	42	25	7,10	H
8.1B	select and use appropriate forms of rational numbers to solve real-life problems including those involving proportional relationships	2,45	40	12	H
8.1C	approximate (mentally and with calculators) the value of irrational; numbers as they arise from problem situations	30	42	43	H
8.1D	express numbers in scientific notation, including negative exponents, in appropriate problem situations using a calculator	46	3,43	3	H
8.2A	select and use appropriate operations to solve problems and justify the selections	9	6	39	H
8.2B	add, subtract, multiply, and divide rational numbers in problem situations	21,24	35,47	49	H
8.2C	evaluate a solution for reasonableness	11,26	16	34,40	H
8.2D	use multiplication by a constant factor (unit rate) to represent proportional relationships; for example, the arm span of a gibbon is about 1.4 times its height, $a = 1.4h$		37	24	H

<b>OBJECTIVE 2</b>	<b>Patterns, Relationships, and Algebraic Reasoning</b>	<b>10 Total</b>	<b>10 Total</b>	<b>10 Total</b>	<b>10 Total</b>
8.3A	compare and contrast proportional and non-proportional relationships	32,49	23,48	2,41	H
8.3B	estimate and find solutions to application problems involving percents and proportional relationships such as similarity and rates	15,27	21,24	11,21	H
8.4	generate a different representation given one representation of data such as a table, graph, equation, or verbal description	1,47	7,19	27,44	H
8.5A	estimate, find, and justify solutions to application problems using appropriate tables graphs, and algebraic equations	12,40	1,14	18,28	H
8.5B	use an algebraic expression to find any term in a sequence	29,36	32,39	30,42	H

### 8th Grade Mathematics TAKS Matrix

<b>OBJECTIVE 3</b>	<b>Geometry and Spatial Reasoning</b>	<b>7 Total</b>	<b>7 Total</b>	<b>7 Total</b>	<b>7 Total</b>
8.6A	generate similar shapes using dilations including enlargements and reductions	31	15	48	H
8.6B	graph dilations, reflections, and translations on a coordinate plane	10,43	27	38	H
8.7A	draw solids from different perspectives	50	44	46	H
8.7B	use geometric concepts and properties to solve problems in fields such as art and architecture	13	5,38	13	M
8.7C	use pictures or models to demonstrate the Pythagorean Theorem	37	22	22	H
8.7D	locate and name points on a coordinate plane using ordered pairs of rational numbers		2	1,32	H

<b>OBJECTIVE 4</b>	<b>Measurement</b>	<b>5 Total</b>	<b>5 Total</b>	<b>5 Total</b>	<b>5 Total</b>
8.8A	find surface area of prisms and cylinders using concrete models and nets (two-dimensional models)	23	13	31	H
8.8B	connect models to formulas for volume of prisms, cylinders, pyramids, and cones				M
8.8C	estimate answers and use formulas to solve application problems involving surface area and volume	28	33	26	H
8.9A	use the Pythagorean Theorem to solve real-life problems	19	17	8	H
8.9B	use proportional relationships in similar shapes to find missing measurements	7	36	14	H
8.10A	describe the resulting effects on perimeter and area when dimensions of a shape are changed proportionally		28	25	H
8.10B	describe the resulting effect on volume when dimensions of a solid are changed proportionally	38			H

<b>OBJECTIVE 5</b>	<b>Probability and Statistics</b>	<b>8 Total</b>	<b>8 Total</b>	<b>8 Total</b>	<b>8 Total</b>
8.11A	find the probabilities of compound events (dependent and independent)	22	30	16	H
8.11B	use theoretical probabilities and experimental results to make predictions and decisions	8	49	5	H
8.11C	select and use different models to simulate an event				M
8.12A	select the appropriate measure of central tendency to describe a set of data for a particular purpose	17	18	19,23	H
8.12B	draw conclusions and make predictions by analyzing trends in scatterplots	14	11,50	5,50	H
8.12C	construct circle graphs, bar graphs, and histograms with and without technology	3	4		H
8.13A	evaluate methods of sampling to determine validity of an inference made from a set of data	4	8	36	H
8.13B	recognize misuses of graphical or numerical information and	16,41	45	5	H

### 8th Grade Mathematics TAKS Matrix

OBJECTIVE 6	Mathematical Processes and Tools	10 Total	10 Total	10 Total	10 Total
8.14A	identify and apply mathematics to everyday experiences, to activities in and outside of school, with other disciplines, and with other mathematical topics	25,48	26	47	H
8.14B	use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness	5,33,35,39	12,20	45	H
8.14C	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	6	34,46	17	H
8.14D	select tools such as real objects, manipulatives, paper/pencil, and technology or techniques such as mental math, estimation, and number sense to solve problems				M
8.15A	communicate mathematical ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic mathematical models	18	9,31	20,29,37	H
8.15B	evaluate the effectiveness of different representations to communicate ideas				M
8.16A	make conjectures from patterns or sets of examples and nonexamples	20	10	4,35	H
8.16B	validate his/her conclusions using mathematical properties and relationships	44	29,41	15,33	H