

Oklahoma Algebra 2 PASS Mathematics
Content Standards
Correlated to *Glencoe Algebra 2*

PASS Mathematics Content Standard		Lesson References
Standard 1: Number Systems and Algebraic Operations - The student will perform operations with real numbers, complex numbers and matrices.		
1.1	Define and perform operations on real and complex numbers.	1-1, 1-2, 1-3, 1-4, 5-9
1.2	Convert expressions from radical notations and vice versa.	5-6, 5-7
1.3.a	Add, subtract, and multiply matrices to solve problems.	4-2, 4-3, 4-4, 4-7
1.3.b	Find the inverse and determinant of a matrix to solve problems.	4-5, 4-7
1.3.c	Use matrices to solve systems of equations.	4-6, 4-8, 4-8F
Standard 2: Relations and Functions - The student will use functions and relations to solve problems.		
2.1	Recognize the parent graph of the functions $y = x^2$ and predict the effects of transformations on the parent graph (e.g., $y = x^2 + 3$ shifts the graph up 3, $y = 3x^2$ creates vertical stretching by a factor of 3).	6-6P, 6-6
2.2	Solve, graph and analyze systems of linear equations and inequalities.	3-1, 3-2, 3-3, 3-3, 3-4, 3-5P, 3-5
2.3	Solve quadratic equations by graphing, factoring, completing the square and quadratic formula.	6-2, 6-3, 6-4, 6-5
2.4	Compare the relationship between the x -intercepts (zeros) of a quadratic function and the roots of a quadratic equation to solve problems.	6-2, 6-3, 6-4, 6-5
2.5	Interpret the maximum and minimum value and the y -intercept of a quadratic function.	6-1, 6-6
2.6	Identify, graph, and write the equations of the conic sections.	8-2, 8-3, 8-4P, 8-4, 8-5, 8-6
2.7	Define and distinguish between relations and functions.	2-1, 2-2, 7-8
2.8	Use functional notation and specify domain and range.	2-1, 2-2, 2-6, 7-7, 7-8
2.9	Find and graph the inverse of a function.	7-8, 10-2
2.10.a	Interpret and graph exponential and logarithmic functions.	10-1P, 10-1, 10-2, 10-2B, 10-4F
2.10.b	Apply the inverse relationship between exponential and logarithmic functions.	10-2, 10-4, 10-5
2.10.c	Use exponential and logarithmic functions to solve problems (e.g., compound interest, exponential growth or exponential decay).	10-1, 10-2, 10-3, 10-4, 10-5, 10-6
2.11	Solve multistep problems using concepts such as rate, distance, ratio and proportion, average, and percent.	2-2, 2-3, 2-4, 8-1, 9-3, 9-4, 9-6, 10-2, 10-3, 11-1, 11-2, 11-3, 11-4
2.12.a	Use synthetic division to find the solutions of a polynomial.	5-3, 7-4
2.12.b	Use factoring to find the solutions of a polynomial.	5-4, 6-3, 7-3

2.12.c	Graph a polynomial and identify the x - and y -intercepts, relative maximums and relative minimums.	2-2, 6-1, 6-2, 6-3, 6-4, 6-5, 6-6, 7-2
2.13.a	Simplify rational expressions.	5-4, 9-1, 9-2
2.13.b	Solve rational equations.	9-6, 9-6F
2.13.c	Graph rational expressions and identify x - and y -intercepts, horizontal asymptotes and vertical asymptotes.	9-3, 9-3F, 9-6F
Standard 3: Data Analysis and Statistics - The student will use data analysis and statistics to formulate and justify predictions from a set of data.		
3.1	Collect data involving two variables and display on a scatter plot, interpret results using a linear, exponential or quadratics model/equation and identify whether the model/equation is a curve of best fit for the data.	2-5, 2-5F, 6-2F, 7-2F, 10-2F
3.2	Analyze and synthesize data using measures of central tendency and standard deviation.	12-6, 12-7, 12-8F
3.3	Identify how given outliers affect representations of data (e.g., a regression line may be strongly affected by a few aberrant points while the same aberrant points might indicate a mistake on a scatter plot).	12-6, 12-7, 12-9
3.4	Differentiate between arithmetic and geometric sequences and series.	11-1, 11-2, 11-3, 11-4P, 11-4, 11-5