

Name: _____

Algebra 2 Units 1-6 Review

Unit 1

1.	Solve. $3 + \sqrt{6x + 12} = 9$	3.	$\frac{8a^9b^{17}c^{-3}}{a^5b^{-4}c^{-9}} \cdot \frac{a^2b^{-7}c}{16a^9b^6c^0}$
2.	$\frac{m^8(m^6n^{-4})^3p^0}{m^8n^{-5}p^9}$		

Units 2 & 3

4.	Solve the system of equations. $\begin{cases} 8x - 3y = 7 \\ x + 4y = 14 \end{cases}$	5.	Identify the fraction in its simplest form that is equivalent to 0.37777... A. $\frac{34}{90}$ B. $\frac{32}{90}$ C. $\frac{16}{45}$ D. $\frac{17}{45}$
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Unit 5

6.	Factor. $6x^2 + 7x + 2$	7.	Use the parent function $f(x) = x^2$ to describe the transformations to $g(x) = -3(x + 5)^2 - 8$.
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8.	Find the zeros. $f(x) = x^2 + 5x + 3$	9.	How many solutions will the equation have? Will they be real or imaginary? $x^2 = 5x - 7$
10.	Determine the roots of the function. $f(x) = x^2 + 8x + 4$	11.	Determine the sum of two positive consecutive integers, given that one integer multiplied by a third of the other will equal 10.
12.	Provide a counterexample that disproves the inequality. Assume that x represents a real number. $x + 2 > \frac{x}{2}$	13.	Simplify. i^{3719}
14.	Graph. $y \leq 3x^2 + 7x - 6$	15.	Find the x -intercepts of the function. $f(x) = x^2 + 7x - 44$

Unit 6

16.	Use the binomial theorem to expand. $(7a - b)^5$	17.	Determine the product. $(5p - 6)(8p^3 - 5p^2 + 1)$
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