

Looking Ahead: Algebra 2 Unit 8

The questions below are examples of the type of questions you'll see on your **Semester 2 Final**. This is how these tests will ask you to apply your skills from **Unit 8**, as well as your common sense math skills. They are structured in a way that is deliberately complicated, but the skills are the same as what you have learned up to this point.

Semester 2 Final Examples

1.	Solve. $\frac{4x}{x^2 - 2x - 3} = \frac{2x}{x^2 + x - 12}$	4.	Subtract. For what values of x is the expression undefined? $\frac{-13x^2 + 8x - 2}{5x + 4} - \frac{9x^2 + 6x}{5x + 4}$
2.	The number of dogs and cats at the groomer varies inversely. If there can be 6 cats and 9 dogs, how many dogs would there need to be to have 3 cats?	5.	Simplify and identify any values of x for which the expression is undefined. $\frac{x^2 - x - 20}{x^2 + 2x - 35}$
3.	Simplify. Assume that the answer is a real number. $\sqrt[7]{128m^{42}n^{35}}$	6.	Simplify. $27^{\frac{2}{3}}$

7.	<p>Simplify. Assume all expressions are defined.</p> $\frac{\frac{2}{x+7} - \frac{x+3}{5}}{\frac{x+3}{x+7}}$	9.	<p>Graph the function, and identify the holes in the graph.</p> $f(x) = \frac{x^2 + 11x + 24}{x + 8}$
8.	<p>Divide.</p> $\frac{x^2 + 11x + 18}{4x^2 + 8x - 32} \div \frac{x^2 + 14x + 45}{4x^2 + 12x - 40}$	10.	<p>Add.</p> $\frac{x-9}{x+9} + \frac{3x+6}{x^2+11x+18}$