



Algebra II Practice Test

Unit 5: Rational Expressions and Rational Functions

Name _____

Date _____

1. Reduce: $\frac{2a^3 - 16}{4a^2 - 12a + 8}$

2. For the rational function $f(x) = \frac{x-4}{x-2}$, find $f(0)$, $f(-4)$, $f(4)$, $f(-2)$, and $f(2)$.

3. Divide: $\frac{8x^3y^5 - 16x^2y^2 + 4x^4y^3}{-2x^2y}$

4. Divide: $\frac{2x^2 - 7x + 9}{x - 2}$

5. Multiply: $\frac{2y^2 - 4y}{2y^2 - 2} \cdot \frac{y^2 - 2y - 3}{y^2 - 5y + 6}$

6. Subtract: $\frac{2x-2}{x^2+4x+3} - \frac{x-1}{x^2+5x+6}$

7. Simplify: $\frac{1 - \frac{16}{x^2}}{1 + \frac{8}{x} + \frac{16}{x^2}}$

8. Solve: $\frac{5}{x^2 - 3x + 2} - \frac{1}{x - 2} = \frac{1}{3x - 3}$

9. Solve for y : $x = \frac{y-4}{y-2}$

10. The current of a river is 3 miles per hour. It takes a motorboat a total of 3 hours to travel 12 miles upstream and return 12 miles downstream. What is the speed of the boat in still water?