

Name: _____
Algebra 1Date: _____
Band: _____**Rational Expressions Study Guide****LT#1:** Simplify rational expressions.**Simplify each expression. State any excluded values.**

1. $\frac{2x^2+6x}{10x^3}$

2. $\frac{m-3}{3m-9}$

3. $\frac{x^2+6x+9}{5x+15}$

4. $\frac{2a^2-4a+2}{3a^2-3}$

5. $\frac{2s^2-5s-12}{2s^2-9s+4}$

6. $\frac{4-c}{2c-8}$

LT#2: Multiply and divide rational expressions.

LT#3: Simplify complex fractions.

Multiply or divide.

7. $\frac{4x+12}{x^2-2x} \cdot \frac{x}{6x+18}$

8. $\frac{a^2+5a+4}{a^3} \div \frac{a^2+3a+2}{a^2-2a}$

9. $\frac{x^2+13x+40}{x-7} \div \frac{x+8}{x^2-49}$

LT#4: Add and subtract rational expressions.**Add or subtract.**

10. $\frac{8x}{x+1} - \frac{3}{x+1}$

11. $\frac{6}{7x} + \frac{1}{4}$

12. $\frac{5}{2+x} + \frac{x}{x-4}$

13. $\frac{9}{3x-1} - \frac{5x}{2x+3}$