Name_____

Rational Expression Worksheet #1: Simplifying

Simplify.

1. $\frac{18x^6}{27x^4}$

$= \frac{2x^2}{3}$

2. $\frac{3x^2}{12x}$

$= \frac{x}{4}$

3. $\frac{10a^3b}{-15ab^3}$

$= \frac{2a^2}{-3b^2}$

4. $\frac{36k^3m}{24k^4mn^5}$

$= \frac{3}{2kn^5}$

5. $\frac{12x^2}{9x^2y}$

$= \frac{4}{3y}$

6. $\frac{42x^2}{-36x^3}$

$= \frac{7}{-6x}$

7. $\frac{16a^2b^3c^4}{20a^7b^2c^2}$

$= \frac{4bc^2}{5a^5}$

8.. $\frac{120x^3y}{25xy^5}$

$= \frac{24x^2}{5y^4}$

9. $\frac{-16x^2y^7}{12x^5y^3z^4}$

$= \frac{-4y^4}{3x^3z^4}$

Name_____

Rational Expression Worksheet #2: Simplifying

Simplify ***(remember to factor when necessary)*****.**

1. $\frac{2x+6}{4x-12}$

$= \frac{2(x+3)}{4(x-3)}$

$= \frac{(x+3)}{2(x-3)}$

2. $\frac{x^2+9x+20}{2x+8}$

$= \frac{(x+4)(x+5)}{2(x+4)}$

$= \frac{x+5}{2}$

3. $\frac{6x+24}{x^2+7x+12}$

$= \frac{6(x+4)}{(x+3)(x+4)}$

$= \frac{6}{x+3}$

4. $\frac{3x+18}{x^2+6x}$

$= \frac{3(x+6)}{x(x+6)}$

$= \frac{3}{x}$

5. $\frac{3x-12}{3x^2-12x}$

$= \frac{3(x-4)}{3x(x-4)}$

$= \frac{1}{x}$

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

$= \frac{(x-2)(x-3)}{(x+5)(x-3)}$

$= \frac{x-2}{x+5}$

7. $\frac{4x+4}{x^2+4x+3}$

$= \frac{4(x+1)}{(x+3)(x+1)}$

$= \frac{4}{x+3}$

8. $\frac{x^2-x-12}{x^2-2x-8}$

$= \frac{(x-4)(x+3)}{(x-4)(x+2)}$

$= \frac{x+3}{x+2}$

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

$= \frac{(x-1)(x-4)}{x(x-4)}$

$= \frac{x-1}{x}$