Complex Fractions

Step 1: Find the least common denominator (LCD).

Step 2: Multiply each fraction by what is missing in the LCD.

Step 3: Cancel all denominators.

Step 4: Factor and simplify.

Directions: Simplify each complex fraction.

1. $\dfrac{\dfrac{12a}{b^3}}{\dfrac{b^2}{4}}$

2. $\dfrac{\dfrac{3}{a}+\dfrac{1}{2a}}{a+\dfrac{a}{2}}$

3. $\dfrac{\dfrac{1}{x^2}-\dfrac{3}{x}}{3+\dfrac{1}{x^2}}$

4. $\dfrac{\dfrac{x}{y}-\dfrac{1}{x}}{\dfrac{y}{x}+\dfrac{1}{y}}$

5. $\dfrac{\dfrac{25}{x-y}+\dfrac{4}{x+y}}{\dfrac{5}{x-y}-\dfrac{3}{x+y}}$