Adding and Subtracting Rational Expressions—Part 1

When adding or subtracting fractions that have the same denominator:
1. Keep the denominator and collect like terms in the numerators.
2. Try to reduce the expression by factoring.

Directions:
Perform the indicated operations and reduce to lowest terms.

1. \( \frac{25}{3x} - \frac{4}{3x} \)
2. \( \frac{3x+1}{5x-2} + \frac{4x-6}{5x-2} \)
3. \( \frac{x^2}{2x+3} - \frac{x+6}{2x+3} \)

4. \( \frac{5}{x-2} - \frac{6}{2-x} \)
5. \( \frac{x}{y-3} + \frac{5x}{3-y} \)

6. \( \frac{3x^2-7}{x-4} + \frac{x^2-2x+12}{4-x} \)