

Name Key

## Rational Expression Worksheet #6: Adding/Subtracting

Add or subtract these rational expressions.

$$1. \quad \frac{9}{15x} + \frac{2}{15x} \quad x \neq 0$$

$$\frac{11}{15x}$$

$$2. \quad \frac{5x}{7} - \frac{2x}{7} \quad x$$

$$\frac{3x}{7}$$

$$3. \quad \frac{4x}{2x+3} + \frac{7}{2x+3} \quad x \neq -\frac{3}{2}$$

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

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

$$\frac{2+x}{5x+9}$$

$$5. \quad \frac{5}{8a} - \frac{2}{8a} \quad a \neq 0$$

$$\frac{3}{8a}$$

$$6. \quad \frac{7}{x-5} - \frac{4}{x-5} \quad x \neq 5$$

$$\frac{3}{x-5}$$

$$7. \quad \frac{y}{y^2-9} + \frac{5}{y^2-9} \quad y \neq 3, -3$$

$$\frac{y+5}{(y-3)(y+3)}$$

$$8. \quad \frac{8}{2x^2} + \frac{3}{2x^2} \quad x \neq 0$$

$$\frac{11}{2x^2}$$

$$9. \quad \frac{2}{x+1} + \frac{1}{x+1} \quad x \neq -1$$

$$\frac{3}{x+1}$$

$$10. \quad \frac{x-1}{3x+4} + \frac{2x+9}{3x+4} \quad x \neq -\frac{4}{3}$$

$$\frac{x-1+2x+9}{3x+4} = \frac{3x+8}{3x+4}$$

$$11. \quad \frac{5x}{3x^2} - \frac{4}{3x^2} \quad x \neq 0$$

$$\frac{5x-4}{3x^2}$$

$$12. \quad \frac{7x+4}{x^2+3x+2} - \frac{3x-2}{x^2+3x+2} \quad x \neq -2, -1$$

$$\frac{7x+4-3x+2}{(x+2)(x+1)}$$

$$\frac{4x+6}{(x+2)(x+1)} = \frac{2(2x+3)}{(x+2)(x+1)}$$