Name _____ Date _____

Mr. Schlansky Algebra II

Adding and Subtracting Fractions Rational Expressions

1. What is the sum of $\frac{2}{x}$ and $\frac{x}{2}$?

(1) 1

(2) $\frac{2+x}{2x}$

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

(4) $\frac{4+x^2}{2x}$

2. Which expression is equivalent to $\frac{a}{x}+\frac{b}{2x}$?

(1) $\frac{2a+b}{2x}$

(2) $\frac{2a+b}{x}$

(3) $\frac{a+b}{3x}$

(4) $\frac{a+b}{2x}$

3. The sum of $\frac{3}{x}+\frac{2}{5}$, $x \neq 0$, is

(1) $\frac{1}{x}$

(2) $\frac{2x+15}{5x}$

(3) $\frac{5}{x+5}$

(4) $\frac{2x+15}{x+5}$

4. What is the sum of $\frac{3}{7n}$ and $\frac{7}{3n}$?

(1) $\frac{1}{n}$

(2) $\frac{10}{21n}$

(3) $\frac{42}{21n}$

(4) $\frac{58}{21n}$

5. The expression $\frac{y}{x}-\frac{1}{2}$ is equivalent to

(1) $\frac{2y-x}{2x}$

(2) $\frac{x-2y}{2x}$

(3) $\frac{1-y}{2x}$

(4) $\frac{y-1}{x-2}$

6. Expressed as a single fraction, what is $\frac{1}{x+1}+\frac{1}{x}$, $x \neq 0,-1$?

(1) $\frac{2x+3}{x^2+x}$ (3) $\frac{2}{2x+1}$

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

7. What is the sum of $\frac{3}{x-3}$ and $\frac{x}{3-x}$?

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

(2) -1 (4) 0

8. Expressed as a single fraction, what is $\frac{1}{x+1}+\frac{1}{x}$, $x \neq 0,-1$?

(1) $\frac{2x+3}{x^2+x}$ (3) $\frac{2}{2x+1}$

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

9. What is the sum of $(y-5)+\frac{3}{y+2}$?

(1) $y-5$ (3) $\frac{y-2}{y+2}$

(2) $\frac{y^2-7}{y+2}$ (4) $\frac{y^2-3y-7}{y+2}$

10. Express in simplest form: $\frac{1}{x}+\frac{1}{x+3}$

11. $\frac{2}{x-4}+\frac{3}{x+4}$

12. $\frac{9}{c+8}-\frac{2}{c}$