

8-5 Practice

Form _____

Simplify each sum or difference. State any restrictions on the variables.

13. $\frac{x^2}{5} + \frac{x^2}{5}$ $\frac{2x^2}{5}$

$y^2 - 5 = 0 \quad y^2 = 5$
 $y \neq \pm\sqrt{5}$
 14. $\frac{6y-4}{y^2-5} + \frac{3y+1}{y^2-5}$ $\frac{9y-3}{y^2-5}$

15. $\frac{2y+1}{3y} + \frac{5y+4}{3y}$
 $\frac{7y+5}{3y}$ $y \neq 0$

16. $\frac{12}{xy^3} - \frac{9}{xy^3}$
 $\frac{3}{xy^3}$ $x \neq 0 \quad y \neq 0$

CD: $10x^2y^2$
 17. $\frac{2y(6)}{2y(5x^2y)} + \frac{5 \cdot x}{(10xy^2)x}$

$\frac{12y}{10x^2y^2} + \frac{5x}{10x^2y^2}$

$\frac{12y+5x}{10x^2y^2}$

18. $\frac{x+2}{x^2+4x+4} + \frac{2(x+2)}{x+2(x+2)}$ LCD: $(x+2)(x+2)$
 $(x+2)(x+2)$ $x \neq -2$
 $\frac{x+2 + 2(x+2)}{(x+2)(x+2)}$

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

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

CD: $5(x+5)(x+1)$
 13. $\frac{4}{(x+1)(x-5)(x+5)} + \frac{6(x-5)}{(x+5)(x+1)(x-5)}$

$\frac{4(x+1) + 6(x-5)}{(x+1)(x-5)(x+5)}$

$\frac{4x+4+6x-30}{(x+1)(x-5)(x+5)}$ $\frac{10x-26}{(x+1)(x-5)(x+5)}$

14. $\frac{y}{4y+8} - \frac{1 \cdot 4}{y^2+2y}$
 $y(4(y+2)) \quad y(y+2) \cdot 4$

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

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

$y \neq 0, -2$

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

$\frac{y-2}{4y}$

$\neq -1, 5, -5$