■ *Find the LCD for each set of fractions. See Example 3.*

21. $\frac{5}{6(x+y)^2}, \frac{3}{4xy^2}$

22. $\frac{1}{8(a-b)^2}, \frac{5}{12a^2b^2}$

23. $\frac{2a}{a^2+5a+4}, \frac{2}{(a+1)^2}$

24. $\frac{3x}{x^2-3x+2}, \frac{3}{(x-1)^2}$

25. $\frac{x+2}{x^2-x}, \frac{x+1}{(x-1)^3}$

26. $\frac{y-1}{y^2+2y}, \frac{y-3}{(y+2)^2}$

27. $\frac{1}{6x^3}, \frac{x}{4x^2-4x}, \frac{x}{(x-1)^2}$

28. $\frac{1}{9y}, \frac{5y}{6y^3-6y}, \frac{y}{(y-1)^3}$

■ *Write each sum or difference as a single fraction in lowest terms. See Example 4.*

29. $\frac{x}{2}+\frac{2x}{3}$

30. $\frac{3y}{4}+\frac{y}{3}$

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

32. $\frac{y}{2}+\frac{2y}{3}-\frac{3y}{4}$

33. $\frac{5}{6}y-\frac{3}{4}y$

34. $\frac{3}{4}x-\frac{1}{6}x$

35. $\frac{2}{3}y-\frac{1}{6}y+\frac{1}{4}y$

36. $\frac{3}{4}y+\frac{1}{3}y-\frac{5}{6}y$

■ *See Example 5.*

37. $\frac{x+1}{2x}+\frac{2y-1}{3y}$

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

39. $\frac{5}{x+1}+\frac{3}{x-1}$

40. $\frac{2}{y+2}+\frac{3}{y-2}$

41. $\frac{y}{2y-1}-\frac{2y}{y+1}$

42. $\frac{2x}{3x+1}-\frac{x}{x-2}$

43. $\frac{y-1}{y+1}-\frac{y-2}{2y-3}$

44. $\frac{x-2}{2x+1}-\frac{x+1}{x-1}$

■ *See Example 6.*

45. $\frac{7}{5x-10}-\frac{5}{3x-6}$

46. $\frac{2}{3y+6}-\frac{3}{2y+4}$

47. $\frac{2}{x^2-x-2}+\frac{2}{x^2+2x+1}$

48. $\frac{1}{y^2-1}+\frac{1}{y^2+2y+1}$

49. $\frac{y}{y^2-16}-\frac{y+1}{y^2-5y+4}$

50. $\frac{x}{x^2-5x+6}-\frac{x-1}{x^2-9}$

51. $\frac{y-1}{y^2-3y}-\frac{y+1}{y^2+2y}$

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

53. $\frac{2x+1}{x^2-4}-\frac{3x-2}{x^2-4x+4}$

54. $\frac{3y-1}{y^2-4y+3}-\frac{y+2}{(y-3)^2}$

55. $\frac{1}{z^2-7z+12}+\frac{2}{z^2-5z+6}-\frac{3}{z^2-6z+8}$