

# ADDING & SUBTRACTING RATIONAL EXPRESSIONS PRACTICE

1.  $\frac{x-4}{3} + \frac{5x}{3}$

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

3.  $\frac{8}{x} + \frac{x+9}{x}$

4.  $\frac{3x-8}{4x} + \frac{-x+8}{4x}$

5.  $\frac{3x-6}{24x} + \frac{3x+6}{24x}$

6.  $\frac{2x+3}{x+5} - \frac{x-3}{x+5}$

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

8.  $\frac{8}{3(x+8)} + \frac{4}{3(x+8)}$

9.  $\frac{3}{2(x-9)} + \frac{9}{2(x-9)}$

10.  $\frac{7}{3(x-1)} + \frac{5}{3(x-1)}$

11.  $\frac{4x+7}{x+5} - \frac{x-6}{x+5}$

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

13.  $\frac{5x+1}{x^2-64} - \frac{4x-7}{x^2-64}$

14.  $\frac{2x^2+7x-3}{x^2+4x-12} - \frac{2x^2+6x-1}{x^2+4x-12}$

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

16.  $\frac{5x-4}{x^2-6x-7} + \frac{5-4x}{x^2-6x-7}$

17.  $\frac{3x-8}{x^2-9} - \frac{2x-5}{x^2-9}$

18.  $\frac{4x-7}{x^2-25} - \frac{3x-2}{x^2-25}$

19.  $\frac{2}{3x} + \frac{4}{x}$

20.  $\frac{6}{x} + \frac{7}{5x^2}$

21.  $\frac{3}{x} + \frac{6}{7x^2}$

22.  $\frac{4}{x} + \frac{7}{6x^2}$

23.  $\frac{6}{5x^3y} - \frac{1}{2x^2y^3}$

24.  $\frac{5}{xy} + \frac{7}{2x^2}$

25.  $2x + \frac{x}{y}$

26.  $\frac{5x-3}{4x} - \frac{1}{6x}$

27.  $\frac{7}{3x} - \frac{4}{5x^2}$

28.  $\frac{5}{x} + 8$

29.  $7 - \frac{4}{x-9}$

30.  $\frac{x-1}{x-2} - \frac{x^2+4x-4}{x^2+4x-12}$

31.  $\frac{x+2}{x-6} - \frac{x^2+5x+14}{x^2-2x-24}$

32.  $\frac{x+2}{x-7} - \frac{x^2+4x+13}{x^2-4x-21}$

33.  $\frac{x-4}{x^2+5x+6} + \frac{x-1}{x^2-4}$

34.  $\frac{x-4}{x^2+4x+3} - \frac{x-1}{x^2-9}$

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

36.  $-\frac{x-2}{x^2-2x-8} - \frac{x-1}{x^2-4}$

37.  $\frac{x+5}{x^2+3x-4} + \frac{x+2}{x^2-1}$

38.  $\frac{x+1}{x^2+6x+9} + \frac{x-4}{x^2-9}$

39.  $\frac{3x-1}{x^2+2x-3} - \frac{x+4}{x^2-9}$

40.  $\frac{3x-2}{x^2+2x-24} - \frac{x-3}{x^2-16}$

41.  $\frac{2}{x^2-5x+4} + \frac{-2}{x^2-4}$

42.  $\frac{3}{x^2-7x+6} + \frac{-3}{x^2-9}$

43.  $3 + \frac{x}{x+2} - \frac{2}{x^2-4}$

44.  $2 + \frac{x}{x-3} - \frac{3}{x^2-9}$

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

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

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

48.  $\frac{5x}{1-2x} - \frac{2x}{2x+1} + \frac{3}{4x^2-1}$

49.  $\frac{1}{x^2+5x+6} - \frac{2}{x^2+3x+2} + \frac{1}{x^2-3x-4}$

50.  $\frac{2}{x^2-5x+6} - \frac{4}{x^2-2x-3} + \frac{2}{x^2+4x+3}$

# PRACTICE ANSWERS

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

$$2. \frac{x+5}{7}$$

$$3. \frac{x+17}{x}$$

$$4. \frac{1}{2}$$

$$5. \frac{1}{4}$$

$$6. \frac{x+6}{x+5}$$

$$7. \frac{x+10}{x+4}$$

$$8. \frac{4}{x+8}$$

$$9. \frac{6}{x-9}$$

$$10. \frac{4}{x-1}$$

$$11. \frac{3x+13}{x+5}$$

$$12. \frac{1}{x-2}$$

$$13. \frac{1}{x-8}$$

$$14. \frac{1}{x+6}$$

$$15. \frac{1}{x-4}$$

$$16. \frac{1}{x-7}$$

$$17. \frac{1}{x+3}$$

$$18. \frac{1}{x+5}$$

$$19. \frac{14}{3x}$$

$$20. \frac{30x+7}{5x^2}$$

$$21. \frac{21x+6}{7x^2}$$

$$22. \frac{24x+7}{6x^2}$$

$$23. \frac{12y^2-5x}{10x^3y^3}$$

$$24. \frac{10x+7y}{2x^2y}$$

$$25. \frac{2xy+x}{y}$$

$$26. \frac{15x-11}{12x}$$

$$27. \frac{35x-12}{15x^2}$$

$$28. \frac{8x+5}{x}$$

$$29. \frac{7x-67}{x-9}$$

$$30. \frac{1}{x+6}$$

$$31. \frac{1}{x+4}$$

$$32. \frac{1}{x+3}$$

$$33. \frac{2x^2-4x+5}{(x+2)(x-2)(x+3)}$$

$$34. \frac{13-7x}{(x+1)(x-3)(x+3)}$$

$$35. \frac{2x^2-2x+11}{(x+2)(x-2)(x+1)}$$

$$36. \frac{-2x^2+9x-8}{(x-4)(x-2)(x+2)}$$

$$37. \frac{2x^2+12x+13}{(x-1)(x+1)(x+4)}$$

$$38. \frac{-x+9}{(x+3)^2(x-3)}$$

$$39. \frac{2x^2-13x+7}{(x+3)(x-1)(x-3)}$$

$$40. \frac{2x^2+7x+10}{(x+6)(x+4)(x-4)}$$

$$41. \frac{10x-16}{(x-4)(x-1)(x+2)(x-2)}$$

$$42. \frac{21x-45}{(x-6)(x-1)(x+3)(x-3)}$$

$$43. \frac{4x^2-2x-14}{(x+2)(x-2)}$$

$$44. \frac{3x^2-3x-21}{(x+3)(x-3)}$$

$$45. 0$$

$$46. \frac{-x}{(x+3)(x-1)}$$

$$47. \frac{-3x^2-3x-4}{(x+1)(x-1)}$$

$$48. \frac{-14x^2-3x+3}{(2x+1)(2x-1)}$$

$$49. \frac{4x+26}{(x+3)(x+2)(x+1)(x-4)}$$

$$50. \frac{-6x+42}{(x-3)(x-2)(x+1)(x+3)}$$