

8-6 Skills Practice**Solving Rational Equations and Inequalities**

Solve each equation or inequality. Check your solutions.

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

2. $2 = \frac{4}{n} + \frac{1}{3}$

3. $\frac{9}{3x} = \frac{-6}{2}$

4. $3 - z = \frac{2}{z}$

5. $\frac{2}{d+1} = \frac{1}{d-2}$

6. $\frac{s-3}{5} = \frac{8}{s}$

7. $\frac{2x+3}{x+1} = \frac{3}{2}$

8. $-\frac{12}{y} = y - 7$

9. $\frac{x-2}{x+4} = \frac{x+1}{x+10}$

10. $\frac{3}{k} - \frac{4}{3k} > 0$

11. $2 - \frac{3}{v} < \frac{5}{v}$

12. $n + \frac{3}{n} < \frac{12}{n}$

13. $\frac{1}{2m} - \frac{3}{m} < -\frac{5}{2}$

14. $\frac{1}{2x} < \frac{2}{x} - 1$

15. $\frac{15}{x} + \frac{9x-7}{x+2} = 9$

16. $\frac{3b-2}{b+1} = 4 - \frac{b+2}{b-1}$

17. $2 = \frac{5}{2q} + \frac{2q}{q+1}$

18. $8 - \frac{4}{z} = \frac{8z-8}{z+2}$

19. $\frac{1}{n+3} + \frac{5}{n^2-9} = \frac{2}{n-3}$

20. $\frac{1}{w+2} + \frac{1}{w-2} = \frac{4}{w^2-4}$

21. $\frac{x-8}{2x+2} + \frac{x}{2x+2} = \frac{2x-3}{x+1}$

22. $\frac{12s+19}{s^2+7s+12} - \frac{3}{s+3} = \frac{5}{s+4}$

23. $\frac{2e}{e^2-4} + \frac{1}{e-2} = \frac{2}{e+2}$

24. $\frac{8}{t^2-9} + \frac{4}{t+3} = \frac{2}{t-3}$