

**Practice C**

For use with pages 690–697

Solve the equation by cross multiplying or by multiplying each side by the least common denominator.

1.  $\frac{x}{30} = \frac{3}{10}$

2.  $\frac{5}{15} = \frac{x}{75}$

3.  $\frac{x+1}{10} = \frac{2}{5}$

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

5.  $\frac{8}{2x-1} = 2$

6.  $\frac{5-x}{10} = \frac{3}{2}$

7.  $\frac{3}{x-4} + 2 = \frac{5}{x-4}$

8.  $\frac{16}{2-x} = \frac{4}{x}$

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

10.  $\frac{8}{x-2} = \frac{4}{x+1}$

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

12.  $\frac{4}{x-4} = \frac{2}{x-2}$

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

14.  $\frac{3x+1}{3x-4} = \frac{x}{x-2}$

15.  $\frac{x-2}{x-5} = \frac{2x}{2x+5}$

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

17.  $\frac{4}{2x+6} - \frac{3}{x+3} = \frac{x}{2}$

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

19.  $\frac{x}{x+4} - \frac{3}{x-4} = \frac{-22}{x^2-16}$

20.  $\frac{3}{2x-4} = \frac{-5}{x+2}$

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

22.  $\frac{10}{4x-4} = \frac{3}{x-1} + \frac{x+3}{8}$

23.  $2 - \frac{x}{(x+1)^2} = \frac{2}{x+1}$

24.  $2x + \frac{3x-1}{x-2} = \frac{5}{x-2}$

25.  $\frac{2x}{x-1} = \frac{x+2}{x-4} - \frac{18}{x^2-5x+4}$

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

Sketch a graph of the function. Describe the domain.

27.  $y = \frac{1}{x+5}$

28.  $y = \frac{4}{x} - 3$

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

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

31.  $y = \frac{-2x}{x+5}$

32.  $y = \frac{4-x}{x-2}$

**33. Addressing Envelopes** Two clerks are addressing advertising envelopes for a company. One clerk can address one envelope every 30 seconds, whereas it takes 40 seconds for the second clerk to address one envelope. How long will it take them, working together, to address 140 envelopes?

**34. Airplane Fuel** A single-engine airplane carries enough fuel for an 8-hour flight. After the airplane has been flying for 1 hour, the fuel tank begins to leak at a rate that would empty the tank in 12 hours. How long does the plane have until it will run out of fuel?