

**Exercise 2.6**

answers on p. 427

Solve the following equations.

1.  $\frac{x+3}{2} = 9$

3.  $\frac{x+13}{6} = \frac{2}{3}$

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

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

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

11.  $\frac{3x}{8} - \frac{3-x}{4} = \frac{1}{6}$

13.  $\frac{x}{3} + \frac{2(x+2)}{4} = \frac{1}{3} - \frac{x}{6}$

15.  $\frac{2(x-1)}{3} - \frac{3(2x+1)}{5} = \frac{1}{3} - \frac{x}{5}$

17.  $\frac{9}{x} = 3$

19.  $\frac{2}{x-2} = \frac{1}{4}$

21.  $\frac{5}{2(x-1)} = \frac{3}{5}$

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

25.  $\frac{5}{2(1+2x)} = \frac{3}{2(1+2x)} - 2$

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

4.  $\frac{2x-5}{9} = \frac{1}{3}$

6.  $\frac{2x}{3} - \frac{11-x}{5} = 3$

8.  $\frac{5x}{7} + \frac{3x+1}{2} = 16$

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

12.  $\frac{4x}{5} + \frac{2x-3}{4} = \frac{9}{10}$

14.  $\frac{3(2+x)}{4} - \frac{3(3-x)}{8} = \frac{5}{12}$

16.  $\frac{4(2x-1)}{5} + \frac{2(3-x)}{4} = \frac{3}{10} - \frac{2x}{5}$

18.  $\frac{6}{x} = \frac{5}{6}$

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

22.  $\frac{4}{3(2-x)} = 5$

24.  $\frac{12}{2x-1} = 2 + \frac{2}{2x-1}$

26.  $3 + \frac{4}{x+4} = 1 - \frac{3}{x+4}$

Harder Questions with X in the denominator

$$*27. \frac{1}{x-3} + \frac{3}{x-2} = 0$$

$$*29. \frac{3}{x+2} - \frac{4}{x+3} = 0$$

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

$$33. \frac{5}{6x} + \frac{7}{9x} = 29$$

$$*35. \frac{1}{2x} + \frac{2}{3x} - \frac{3}{4x} = \frac{5}{8}$$

$$*37. \frac{7}{3x-2} + \frac{9}{6x-4} = \frac{23}{26}$$

$$*28. \frac{2}{x-1} + \frac{4}{x-2} = 0$$

$$*30. \frac{4}{x-1} = 3 - \frac{2}{1-x}$$

$$32. \frac{42-7x}{27+5x} = \frac{1}{2}$$

$$34. \frac{8}{9x} - \frac{7}{12x} = \frac{1}{36}$$

$$*36. \frac{2}{3x} - \frac{3}{7x} + \frac{1}{6x} = \frac{2}{7}$$

$$*38. \frac{5}{21x-6} - \frac{9}{8-28x} = \frac{47}{60}$$

Exercise 2.6 (p. 42)

1.  $x = 15$

4.  $x = 4$

7.  $x = -5$

10.  $x = 6\frac{1}{2}$

13.  $x = -\frac{2}{3}$

16.  $x = -\frac{4}{15}$

19.  $x = 10$

22.  $x = 1\frac{11}{15}$

25.  $x = -\frac{3}{4}$

28.  $x = 1\frac{1}{3}$

31.  $x = 15$

34.  $x = 11$

37.  $x = 5$

2.  $x = 6$

5.  $x = 5$

8.  $x = 7$

11.  $x = 1\frac{7}{15}$

14.  $x = \frac{1}{27}$

17.  $x = 3$

20.  $x = 6$

23.  $x = 1$

26.  $x = -7\frac{1}{2}$

29.  $x = 1$

32.  $x = 3$

35.  $x = \frac{2}{3}$

38.  $x = 1$

3.  $x = -9$

6.  $x = 6$

9.  $x = 1$

12.  $x = 1\frac{7}{26}$

15.  $x = -4\frac{4}{5}$

18.  $x = 7\frac{1}{5}$

21.  $x = 5\frac{1}{6}$

24.  $x = 3$

27.  $x = 2\frac{3}{4}$

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

33.  $x = \frac{1}{18}$

36.  $x = \frac{17}{12}$