

# Lineare und Quadratische Gleichungen

1.  $\frac{5}{4}(3 + \frac{9}{2}x) = 42 - \frac{1}{2}(2 + \frac{7}{6}x)$

1.  $L = \{ \boxed{\phantom{000}} \}$

2.  $\frac{1}{2}(x - 1\frac{1}{3})(x - \frac{2}{3}) = x(\frac{1}{2}x + 1) - \frac{14}{9}$

2.  $L = \{ \boxed{\phantom{000}} \}$

3.  $\frac{5}{4}(x + 2)(x - \frac{5}{2}) = x(\frac{5}{4}x + \frac{4}{3}) - \frac{103}{24}$

3.  $L = \{ \boxed{\phantom{000}} \}$

4.  $-4(1 - 4x) = -(-7x - 2) - 51$

4.  $L = \{ \boxed{\phantom{000}} \}$

5.  $5(-4x - 2) = -8(x - 6) - 166$

5.  $L = \{ \boxed{\phantom{000}} \}$

6.  $-2(2 - 2x) = 6 + 2(1 + \frac{4}{5}x)$

6.  $L = \{ \boxed{\phantom{000}} \}$

7.  $\frac{1}{6}(-\frac{5}{3}x - 1\frac{1}{2}) = -\frac{2}{3}(1 - 2x) - \frac{53}{12}$

7.  $L = \{ \boxed{\phantom{000}} \}$

8.  $5(2x - 2) = 115 + 7(3 - 9x)$

8.  $L = \{ \boxed{\phantom{000}} \}$

9.  $(x + 1)(x + \frac{1}{2}) = 8 + x(x - \frac{9}{4})$

9.  $L = \{ \boxed{\phantom{000}} \}$

10.  $\frac{4}{3}(x + 1\frac{1}{5})(x - 1) = x(\frac{4}{3}x - \frac{3}{5}) - \frac{23}{3}$

10.  $L = \{ \boxed{\phantom{000}} \}$

11.  $5 - 2(x + 4) = x^2 - 3(x + 3)^2 \quad L = \{ \boxed{\phantom{000}} \}$

12.  $(x + 3)(1 + x) - (x + 1)^2 = x^2 - 3x + 2 \quad L = \{ \boxed{\phantom{000}} \}$

13.  $2x^2 + 3x - 8 = 8x - 7x^2 + 3$

13.  $L = \{ \boxed{\phantom{000000}} \}$

14.  $-5x - 2x^2 + 8 = 5x^2 - 5x + 6$

14.  $L = \{ \boxed{\phantom{000000}} \}$

15.  $x^4 - 113 \cdot x^2 + 3136 = 0$

15.  $x_1 = \quad x_2 =$   
 $x_3 = \quad x_4 =$

16.  $x^4 - 74 \cdot x^2 + 1225 = 0$

16.  $x_1 = \quad x_2 =$   
 $x_3 = \quad x_4 =$

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

17.  $L = \{ \boxed{\phantom{000000}} \}$

18.  $-3 \cdot x^2 + 78 \cdot x - 495 = \quad \cdot (\quad) \cdot (\quad)$

19.  $6,9 \cdot x^2 + 27,6 \cdot x + 20,7 = \quad \cdot (\quad) \cdot (\quad)$

20.  $4,1 \cdot x^2 + 4,1 \cdot x - 82 = \quad \cdot (\quad) \cdot (\quad)$

21.  $-x - 4x^2 + 9 = -7x - 2x^2 - 207$

21.  $L = \{ \boxed{\phantom{000000}} \}$

# Lineare und Quadratische Gleichungen

1.  $\frac{5}{4}(3 + \frac{9}{2}x) = 42 - \frac{1}{2}(2 + \frac{7}{6}x)$  1. L = { 6 }
2.  $\frac{1}{2}(x - 1\frac{1}{3})(x - \frac{2}{3}) = x(\frac{1}{2}x + 1) - \frac{14}{9}$  2. L = { 1 }
3.  $\frac{5}{4}(x + 2)(x - \frac{5}{2}) = x(\frac{5}{4}x + \frac{4}{3}) - \frac{103}{24}$  3. L = { -1 }
4.  $-4(1 - 4x) = -(-7x - 2) - 51$  4. L = { -5 }
5.  $5(-4x - 2) = -8(x - 6) - 166$  5. L = { 9 }
6.  $-2(2 - 2x) = 6 + 2(1 + \frac{4}{5}x)$  6. L = { 5 }
7.  $\frac{1}{6}(-\frac{5}{3}x - 1\frac{1}{2}) = -\frac{2}{3}(1 - 2x) - \frac{53}{12}$  7. L = { 3 }
8.  $5(2x - 2) = 115 + 7(3 - 9x)$  8. L = { 2 }
9.  $(x + 1)(x + \frac{1}{2}) = 8 + x(x - \frac{9}{4})$  9. L = { 2 }
10.  $\frac{4}{3}(x + 1\frac{1}{5})(x - 1) = x(\frac{4}{3}x - \frac{3}{5}) - \frac{23}{3}$  10. L = { -7 }
11.  $5 - 2(x + 4) = x^2 - 3(x + 3)^2$  L = { -2; -6 }
12.  $(x + 3)(1 + x) - (x + 1)^2 = x^2 - 3x + 2$  L = { -3; 0 }
13.  $2x^2 + 3x - 8 = 8x - 7x^2 + 3$  13. L = { -0, 86 | 1, 42 }
14.  $-5x - 2x^2 + 8 = 5x^2 - 5x + 6$  14. L = { 0, 53 | -0, 53 }
15.  $x^4 - 113 \cdot x^2 + 3136 = 0$  15.  $x_1 = 8$   $x_2 = -x_1$   
 $x_3 = 7$   $x_4 = -x_3$
16.  $x^4 - 74 \cdot x^2 + 1225 = 0$  16.  $x_1 = 7$   $x_2 = -x_1$   
 $x_3 = 5$   $x_4 = -x_3$
17.  $x - \frac{4}{5}x^2 + \frac{2}{3} = x^2 - \frac{3}{2}x + \frac{3}{2}$  17. L = { 0, 83 | 0, 56 }
18.  $-3 \cdot x^2 + 78 \cdot x - 495 = -3 \cdot (x - 11) \cdot (x - 15)$
19.  $6,9 \cdot x^2 + 27,6 \cdot x + 20,7 = 6,9 \cdot (x + 1) \cdot (x + 3)$
20.  $4,1 \cdot x^2 + 4,1 \cdot x - 82 = 4,1 \cdot (x + 5) \cdot (x - 4)$
21.  $-x - 4x^2 + 9 = -7x - 2x^2 - 207$  21. L = { 12 | -9 }