

Ungleichungen Lösungen der Übungsaufgaben

1. $\mathbb{L} =]3, \infty[$
2. $\mathbb{L} =]-\infty, 6[$
3. $\mathbb{L} =]-\infty, -\frac{1}{11}[$
4. $\mathbb{L} = \mathbb{Q}$

5. $\mathbb{L} =]15, 22]$
6. $\mathbb{L} =]-4, 0]$
7. $\mathbb{L} =]-\frac{1}{3}, \infty[$

8. $\mathbb{L} =]-\infty, 2[\cup]3, \infty[$
9. Lösungshilfe: $x^2 - 25 \geq 0 \iff (x+5)(x-5) \geq 0$
 $\mathbb{L} =]-\infty, -5] \cup [5, \infty[$
10. Lösungshilfe: $x^2 + 7x + 12 \leq 0 \iff (x+3)(x+4) \leq 0$
 $\mathbb{L} = [-3, -4]$
11. $\mathbb{L} =]-\infty, -2] \cup [1, 10]$

12. $\mathbb{L} =]0, 1[$
13. Lösungshilfe: $\frac{x}{x-1} < \frac{1}{4} \iff \frac{x}{x-1} - \frac{1}{4} < 0 \iff \frac{x+\frac{1}{3}}{x-1} < 0$
 $\mathbb{L} =]-\frac{1}{3}, 1[$
14. $\mathbb{L} = [-1, 1[\cup]2, \infty[$
15. Lösungshilfe: $\frac{x+1}{x-1} > \frac{x+2}{x+4} \iff \frac{x+1}{x-1} - \frac{x+2}{x+4} > 0 \iff \frac{x+\frac{3}{2}}{(x-1)(x+4)} > 0$
 $\mathbb{L} =]-4, -\frac{3}{2}[\cup]1, \infty[$

16. $\mathbb{L} = [\frac{3}{2}, \frac{5}{2}]$
17. $\mathbb{L} =]-\infty, \frac{5}{12}[\cup]\frac{7}{12}, \infty[$
18. $\mathbb{L} =]-2.2, 2.2[$
19. $\mathbb{L} = [-5, -1[\cup]1, 5]$