

Gleichungen!

Löse die folgende Gleichungen über die Grundmenge \mathbb{R}

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|---|---|
| 1. $\frac{3}{2} - x = \frac{7}{4}$ | 16. $0.1x - \frac{1}{10}x = x - 2$ |
| 2. $-t - 10 = 2 + 3t$ | 17. $x + x = -x + 3$ |
| 3. $3x - 7 + 5x - 7x - 2 = -x + 3x - 3$ | 18. $-\frac{3}{5}(\frac{1}{3} - \frac{1}{4}x) - \frac{2}{3} = \frac{1}{4}(x - 1) + \frac{1}{6}$ |
| 4. $2(3x + 7x - x) - 5 - 10x = 11$ | 19. $5x = 0$ |
| 5. $3(2x + 1) - 3(x - 2) + 9 = (1 - \frac{1}{2}x)2 + 2x$ | 20. $3x = 4x$ |
| 6. $\frac{1}{4}(\frac{2}{3}x - 6) + 1 = 7$ | 21. $x = x + 1$ |
| 7. $5x - 3(x - 1) = 39$ | 22. $\frac{x+1}{2} - x = -4(-1 - x) + 2$ |
| 8. $3 - 2(2x + 1) = x + 17$ | 23. $\frac{t-1}{2} + \frac{t+1}{2} = 3(t - 5) + \frac{1}{2}$ |
| 9. $\frac{x}{100} + 10 = 20$ | 24. $\frac{3}{7}(\frac{x}{6} + x) - \frac{4}{9} = \frac{1}{2}(1 - x) + \frac{4}{5}$ |
| 10. $10 = 3 + \frac{x}{4}$ | 25. $3(x - 2) = 9(\frac{x}{3} + 1 - \frac{1}{3})$ |
| 11. $-\frac{3}{5} + \frac{y}{10} = -\frac{1}{5} - \frac{y}{5}$ | 26. $\frac{1}{4}(\frac{2}{3}x - 6) + 1 = 7$ |
| 12. $\frac{t}{2} - \frac{4t}{5} = 3 + \frac{3t}{4}$ | 27. $3(\frac{y-1}{3} + \frac{1}{5}) - \frac{y}{2} = \frac{y+3}{4} + 1$ |
| 13. $\frac{x+1}{2} = \frac{x-2}{3}$ | 28. $0 = \frac{4}{3}(\frac{x-1}{2} - \frac{3}{7}) + x$ |
| 14. $\frac{y-1}{3} - \frac{y-2}{4} + \frac{1}{2} = \frac{y}{6}$ | 29. $(6 - x) - (x - 5) - (4 - x) = -\frac{x}{2}$ |
| 15. $\frac{1}{x} + \frac{2}{x} - 6 = \frac{5}{x} - 10$ | 30. $\frac{2}{3}(\frac{2t-1}{2} - \frac{7}{3}) - t = -2(\frac{t-2}{4} - 1) + \frac{t}{2} + 6$ |

Lösungen:

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|-----------------------|-------------------------|-------------------------|--------------------------|-------------------------|
| 1. $-\{\frac{1}{4}\}$ | 7. $\{18\}$ | 13. $\{-7\}$ | 19. $\{0\}$ | 25. \emptyset |
| 2. $\{-3\}$ | 8. $\{-3.2\}$ | 14. $\{8\}$ | 20. $\{0\}$ | 26. $\{45\}$ |
| 3. $\{-6\}$ | 9. $\{1000\}$ | 15. $\{0.5\}$ | 21. \emptyset | 27. $\{\frac{43}{5}\}$ |
| 4. $\{2\}$ | 10. $\{28\}$ | 16. $\{2\}$ | 22. $\{-\frac{11}{9}\}$ | 28. $\{\frac{26}{35}\}$ |
| 5. $\{-8\}$ | 11. $\{\frac{4}{3}\}$ | 17. $\{1\}$ | 23. $\{7.25\}$ | 29. $\{14\}$ |
| 6. $\{45\}$ | 12. $\{-\frac{20}{7}\}$ | 18. $\{-\frac{47}{6}\}$ | 24. $\{\frac{157}{90}\}$ | 30. $\{-\frac{98}{3}\}$ |