

$$\begin{aligned} \underline{1.} \quad 5x + 4 &= 3x + 2 & | -3x \\ 2x + 4 &= 2 & | -4 \\ 2x &= -2 & | :2 \\ \underline{\underline{x &= -1}} \end{aligned}$$

$$\begin{aligned} \underline{2.} \quad x - 2 &= 3x + 4 & | -x \\ -2 &= 2x + 4 & | -4 \\ -6 &= 2x & | :2 \\ \underline{\underline{-3 &= x}} \end{aligned}$$

$$\begin{aligned} \underline{3.} \quad 10x - 8x &= 6 - 4x \\ 2x &= 6 - 4x & | +4x \\ 6x &= 6 & | :6 \\ \underline{\underline{x &= 1}} \end{aligned}$$

$$\begin{aligned} \underline{4.} \quad 6x - 6 &= x + 1 & | -x \\ 5x - 6 &= 1 & | +6 \\ 5x &= 7 & | :5 \\ \underline{\underline{x &= 1,4}} \end{aligned}$$

$$\begin{aligned} \underline{5.} \quad 5x - 18 &= 18 - 5x & | +5x \\ 10x - 18 &= 18 & | +18 \\ 10x &= 36 & | :10 \\ \underline{\underline{x &= 3,6}} \end{aligned}$$

6.

$$0 = -7x - 42 \quad | +7x$$

$$7x = -42 \quad | :7$$

$$\underline{\underline{x = -6}}$$

7.

$$13x - 3x = 3 - 13$$

$$10x = -10 \quad | :10$$

$$\underline{\underline{x = -1}}$$

8.

$$2x - 3 = 4x + 5 \quad | -2x$$

$$-3 = 2x + 5 \quad | -5$$

$$-8 = 2x \quad | :2$$

$$\underline{\underline{-4 = x}}$$

9.

$$8 + 0,5x = 20 \quad | -8$$

$$0,5x = 12 \quad | \cdot 2$$

$$\underline{\underline{x = 24}}$$

10.

$$4x + 8x = 12x + 16$$

$$12x = 12x + 16 \quad | -12x$$

$$\underline{\underline{0 = 16}}$$

$$\underline{\underline{\mathbb{L} = \{\}}}$$
 (,leere Menge')

11.

$$2x + 1 = 7x - 5x + 1$$

$$2x + 1 = 2x + 1 \quad | -2x$$

$$\underline{1 = 1}$$

$$\underline{\mathbb{L} = \underline{\mathbb{G}} \text{ („Grundmenge“ )}}$$

12.

$$x - 0,5x = 2x - 6$$

$$0,5x = 2x - 6 \quad | -0,5x$$

$$0 = 1,5x - 6 \quad | +6$$

$$6 = 1,5x \quad | :1,5$$

$$\underline{\underline{4 = x}}$$

13.

$$8x - 4x - 2x = 8 + 4 + 2$$

$$2x = 14 \quad | :2$$

$$\underline{\underline{x = 7}}$$

14.

$$8x - 4x - 2 = 8 + 4 + 2$$

$$4x - 2 = 14 \quad | +2$$

$$4x = 16 \quad | :4$$

$$\underline{\underline{x = 4}}$$

15.

$$8 - 4x - 2 = 8 + 4 + 2$$

$$6 - 4x = 14 \quad | +4x$$

$$6 = 4x + 14 \quad | -14$$

$$-8 = 4x \quad | :4$$

$$\underline{\underline{-2 = x}}$$

16.

$$x + 2x + 3x = 4 + 5 + 6$$

$$6x = 15 \quad | :6$$

$$\underline{\underline{x = 2,5}}$$

17.

$$4 - 3 - 2x = 2x + 3 - 4$$

$$1 - 2x = 2x - 1 \quad | +2x$$

$$1 = 4x - 1 \quad | +1$$

$$2 = 4x \quad | :4$$

$$\underline{\underline{0,5 = x}}$$

18.

$$1 + 0,5x = 0,5 - x \quad | +x$$

$$1 + 1,5x = 0,5 \quad | -1$$

$$1,5x = -0,5 \quad | :2$$

$$3x = -1 \quad | :3$$

$$\underline{\underline{x = -\frac{1}{3}}}$$

19.

$$12x - 12 = 6 - 6x \quad | +6x$$

$$18x - 12 = 6 \quad | +12$$

$$18x = 18 \quad | :18$$

$$\underline{\underline{x = 1}}$$

20.

$$12 - 12x = 6x - 6 \quad | +12x$$

$$12 = 18x - 6 \quad | +6$$

$$18 = 18x \quad | :18$$

$$\underline{\underline{1 = x}}$$