

# Gleichungen

G.Roolfs

- $3 \cdot x + 11 = 32$

- $3 \cdot x + 11 = 32$

- $3 \cdot x + 11 = 32 \quad | -11$

- $$\begin{aligned} 3 \cdot x + 11 &= 32 &| -11 \\ 3 \cdot x &= 21 &| \end{aligned}$$

- $$\begin{aligned} 3 \cdot x + 11 &= 32 & | -11 \\ 3 \cdot x &= 21 & | :3 \end{aligned}$$

• 
$$\begin{aligned} 3 \cdot x + 11 &= 32 &| -11 \\ 3 \cdot x &= 21 &| :3 \\ x &= 7 \end{aligned}$$

- $$\bullet \quad \begin{aligned} 3 \cdot x + 11 &= 32 &| -11 \\ 3 \cdot x &= 21 &| :3 \\ x &= 7 \end{aligned}$$

- $$\bullet \quad 2 \cdot (x + 1) + 3 \cdot (x - 1) = 39$$

- $$\bullet \quad \begin{aligned} 3 \cdot x + 11 &= 32 &| -11 \\ 3 \cdot x &= 21 &| :3 \\ x &= 7 \end{aligned}$$

- $$\bullet \quad 2 \cdot (x + 1) + 3 \cdot (x - 1) = 39$$

- $$\begin{aligned} 3 \cdot x + 11 &= 32 &| -11 \\ 3 \cdot x &= 21 &| :3 \\ x &= 7 \end{aligned}$$

- $$\begin{aligned} 2 \cdot (x + 1) + 3 \cdot (x - 1) &= 39 \\ 2 \cdot x + 2 + 3 \cdot x - 3 &= 39 \end{aligned}$$

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$$\begin{aligned} 3 \cdot x + 11 &= 32 &| -11 \\ 3 \cdot x &= 21 &| :3 \\ x &= 7 \end{aligned}$$

• 
$$\begin{aligned} 2 \cdot (x + 1) + 3 \cdot (x - 1) &= 39 \\ 2 \cdot x + 2 + 3 \cdot x - 3 &= 39 \\ 5 \cdot x - 1 &= 39 &| \end{aligned}$$

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$$\begin{aligned} 3 \cdot x + 11 &= 32 &| -11 \\ 3 \cdot x &= 21 &| :3 \\ x &= 7 \end{aligned}$$

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$$\begin{aligned} 2 \cdot (x + 1) + 3 \cdot (x - 1) &= 39 \\ 2 \cdot x + 2 + 3 \cdot x - 3 &= 39 \\ 5 \cdot x - 1 &= 39 &| +1 \end{aligned}$$

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$$\begin{aligned} 3 \cdot x + 11 &= 32 &| -11 \\ 3 \cdot x &= 21 &| :3 \\ x &= 7 \end{aligned}$$

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$$\begin{aligned} 2 \cdot (x + 1) + 3 \cdot (x - 1) &= 39 \\ 2 \cdot x + 2 + 3 \cdot x - 3 &= 39 \\ 5 \cdot x - 1 &= 39 &| +1 \\ 5 \cdot x &= 40 &| \end{aligned}$$

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$$\begin{aligned} 3 \cdot x + 11 &= 32 &| -11 \\ 3 \cdot x &= 21 &| :3 \\ x &= 7 \end{aligned}$$

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$$\begin{aligned} 2 \cdot (x + 1) + 3 \cdot (x - 1) &= 39 \\ 2 \cdot x + 2 + 3 \cdot x - 3 &= 39 \\ 5 \cdot x - 1 &= 39 &| +1 \\ 5 \cdot x &= 40 &| :5 \end{aligned}$$

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$$\begin{aligned} 3 \cdot x + 11 &= 32 &| -11 \\ 3 \cdot x &= 21 &| :3 \\ x &= 7 \end{aligned}$$

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$$\begin{aligned} 2 \cdot (x + 1) + 3 \cdot (x - 1) &= 39 \\ 2 \cdot x + 2 + 3 \cdot x - 3 &= 39 \\ 5 \cdot x - 1 &= 39 &| +1 \\ 5 \cdot x &= 40 &| :5 \\ x &= 8 \end{aligned}$$

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$$\begin{aligned} 2 \cdot (x + 1) + 3 \cdot (x - 1) &= 39 \\ 2 \cdot x + 2 + 3 \cdot x - 3 &= 39 \\ 5 \cdot x - 1 &= 39 &| +1 \\ 5 \cdot x &= 40 &| :5 \\ x &= 8 \end{aligned}$$

- $12 - (9 - x) = 5$

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$$12 - 9 + x = 5$$

- $$\begin{aligned} 12 - (9 - x) &= 5 \\ 12 - 9 + x &= 5 \\ 3 + x &= 5 \quad | \end{aligned}$$

- $$\begin{aligned}12 - (9 - x) &= 5 \\12 - 9 + x &= 5 \\3 + x &= 5 \quad | \quad -3\end{aligned}$$

- $$\begin{aligned}12 - (9 - x) &= 5 \\12 - 9 + x &= 5 \\3 + x &= 5 \quad | \quad -3 \\x &= 2\end{aligned}$$

•  $12 - (9 - x) = 5$

$$12 - 9 + x = 5$$

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

$$x = 2$$

•  $2 \cdot (x + 1) + 3 \cdot (x - 1) = 39$

•  $12 - (9 - x) = 5$

$$12 - 9 + x = 5$$

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

$$x = 2$$

•  $2 \cdot (x + 1) + 3 \cdot (x - 1) = 39$

- $$\begin{aligned}12 - (9 - x) &= 5 \\12 - 9 + x &= 5 \\3 + x &= 5 \quad | \quad -3 \\x &= 2\end{aligned}$$

- $$\begin{aligned}2 \cdot (x + 1) + 3 \cdot (x - 1) &= 39 \\2 \cdot x + 2 + 3 \cdot x - 3 &= 39\end{aligned}$$

- $$\begin{aligned}12 - (9 - x) &= 5 \\12 - 9 + x &= 5 \\3 + x &= 5 \quad | \quad -3 \\x &= 2\end{aligned}$$
  
- $$\begin{aligned}2 \cdot (x + 1) + 3 \cdot (x - 1) &= 39 \\2 \cdot x + 2 + 3 \cdot x - 3 &= 39 \\5 \cdot x - 1 &= 39 \quad |\end{aligned}$$

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$$12 - 9 + x = 5$$

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

$$x = 2$$

•  $2 \cdot (x + 1) + 3 \cdot (x - 1) = 39$

$$2 \cdot x + 2 + 3 \cdot x - 3 = 39$$

$$5 \cdot x - 1 = 39 \quad | \quad +1$$

- $$\begin{aligned}12 - (9 - x) &= 5 \\12 - 9 + x &= 5 \\3 + x &= 5 \quad | \quad -3 \\x &= 2\end{aligned}$$

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- $$\begin{aligned}12 - (9 - x) &= 5 \\12 - 9 + x &= 5 \\3 + x &= 5 \quad | \quad -3 \\x &= 2\end{aligned}$$

- $$\begin{aligned}2 \cdot (x + 1) + 3 \cdot (x - 1) &= 39 \\2 \cdot x + 2 + 3 \cdot x - 3 &= 39 \\5 \cdot x - 1 &= 39 \quad | \quad +1 \\5 \cdot x &= 40 \quad | \quad :5 \\x &= 8\end{aligned}$$

- $18 - 5 \cdot (x + 2) = 3$

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- $18 - (5 \cdot x + 10) = 3$

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$$18 - (5 \cdot x + 10) = 3$$

$$18 - 5 \cdot x - 10 = 3$$

- $$\begin{aligned} 18 - 5 \cdot (x + 2) &= 3 \\ 18 - (5 \cdot x + 10) &= 3 \\ 18 - 5 \cdot x - 10 &= 3 \\ 8 - 5 \cdot x &= 3 \end{aligned} \mid$$

- $$\begin{aligned}18 - 5 \cdot (x + 2) &= 3 \\18 - (5 \cdot x + 10) &= 3 \\18 - 5 \cdot x - 10 &= 3 \\8 - 5 \cdot x &= 3 \quad | \quad -8\end{aligned}$$

- $$\begin{aligned}18 - 5 \cdot (x + 2) &= 3 \\18 - (5 \cdot x + 10) &= 3 \\18 - 5 \cdot x - 10 &= 3 \\8 - 5 \cdot x &= 3 \quad | \quad -8 \\-5 \cdot x &= -5 \quad | \quad :\end{aligned}$$

- $$\begin{aligned}18 - 5 \cdot (x + 2) &= 3 \\18 - (5 \cdot x + 10) &= 3 \\18 - 5 \cdot x - 10 &= 3 \\8 - 5 \cdot x &= 3 \quad | \quad -8 \\-5 \cdot x &= -5 \quad | \quad :(-5)\end{aligned}$$

- $$\begin{aligned}18 - 5 \cdot (x + 2) &= 3 \\18 - (5 \cdot x + 10) &= 3 \\18 - 5 \cdot x - 10 &= 3 \\8 - 5 \cdot x &= 3 \quad | \quad -8 \\-5 \cdot x &= -5 \quad | \quad :(-5) \\x &= 1\end{aligned}$$

- $$\begin{aligned}18 - 5 \cdot (x + 2) &= 3 \\18 - (5 \cdot x + 10) &= 3 \\18 - 5 \cdot x - 10 &= 3 \\8 - 5 \cdot x &= 3 \quad | \quad -8 \\-5 \cdot x &= -5 \quad | \quad :(-5) \\x &= 1\end{aligned}$$
- $$2 \cdot (x + 2) - 3 \cdot (x - 5) = 10$$

- $$\begin{aligned}18 - 5 \cdot (x + 2) &= 3 \\18 - (5 \cdot x + 10) &= 3 \\18 - 5 \cdot x - 10 &= 3 \\8 - 5 \cdot x &= 3 \quad | \quad -8 \\-5 \cdot x &= -5 \quad | \quad :(-5) \\x &= 1\end{aligned}$$
- $$2 \cdot (x + 2) - 3 \cdot (x - 5) = 10$$

- $$\bullet \quad 18 - 5 \cdot (x + 2) = 3$$
$$18 - (5 \cdot x + 10) = 3$$
$$18 - 5 \cdot x - 10 = 3$$
$$8 - 5 \cdot x = 3 \quad | -8$$
$$-5 \cdot x = -5 \quad | : (-5)$$
$$x = 1$$

- $$\bullet \quad 2 \cdot (x + 2) - 3 \cdot (x - 5) = 10$$
$$2 \cdot x + 4 - 3 \cdot x + 15 = 10$$

- $$18 - 5 \cdot (x + 2) = 3$$
$$18 - (5 \cdot x + 10) = 3$$
$$18 - 5 \cdot x - 10 = 3$$
$$8 - 5 \cdot x = 3 \quad | -8$$
$$-5 \cdot x = -5 \quad | : (-5)$$
$$x = 1$$

- $$2 \cdot (x + 2) - 3 \cdot (x - 5) = 10$$
$$2 \cdot x + 4 - 3 \cdot x + 15 = 10$$
$$-x + 19 = 10$$

- $$\begin{aligned}18 - 5 \cdot (x + 2) &= 3 \\18 - (5 \cdot x + 10) &= 3 \\18 - 5 \cdot x - 10 &= 3 \\8 - 5 \cdot x &= 3 \quad | \quad -8 \\-5 \cdot x &= -5 \quad | \quad :(-5) \\x &= 1\end{aligned}$$
  
- $$\begin{aligned}2 \cdot (x + 2) - 3 \cdot (x - 5) &= 10 \\2 \cdot x + 4 - 3 \cdot x + 15 &= 10 \\-x + 19 &= 10 \\-x &= -9 \quad |\end{aligned}$$

- $$18 - 5 \cdot (x + 2) = 3$$
$$18 - (5 \cdot x + 10) = 3$$
$$18 - 5 \cdot x - 10 = 3$$
$$8 - 5 \cdot x = 3 \quad | -8$$
$$-5 \cdot x = -5 \quad | : (-5)$$
$$x = 1$$

- $$2 \cdot (x + 2) - 3 \cdot (x - 5) = 10$$
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$$-x + 19 = 10$$
$$-x = -9 \quad | \cdot (-1)$$

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- $$2 \cdot (x + 2) - 3 \cdot (x - 5) = 10$$
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- $$2 \cdot (x + 2) - 3 \cdot (x - 5) = 10$$
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