

Berechne den Wert der Variable x

$$\begin{aligned} 1) \quad 3x - 5 &= 4 && | +5 \\ &\Rightarrow 3x = 9 && | :3 \\ &\Rightarrow x = 3 \end{aligned}$$

$$\begin{aligned} 2) \quad 4x + 4 &= 2x + 8 && | -2x \\ &\Rightarrow 2x + 4 = 8 && | -4 \\ &\Rightarrow 2x = 4 && | :2 \\ &\Rightarrow x = 2 \end{aligned}$$

$$\begin{aligned} 3) \quad 8x + 6 &= 6x + 6 && | -6x \\ &\Rightarrow 2x + 6 = 6 && | -6 \\ &\Rightarrow 2x = 0 && | :2 \\ &\Rightarrow x = 0 \end{aligned}$$

$$\begin{aligned} 4) \quad 6x - 2 &= 3x + 5 && | -3x \\ &\Rightarrow 3x - 2 = 5 && | +2 \\ &\Rightarrow 3x = 7 && | :3 \\ &\Rightarrow x = \frac{7}{3} \end{aligned}$$

$$\begin{aligned} 5) \quad \frac{1}{2} + \frac{4}{5}x &= \frac{3}{2}x + 7 && | -\frac{3}{2}x \\ &\Rightarrow \frac{1}{2} - \frac{7}{10}x = 7 && | -\frac{1}{2} \\ &\Rightarrow -\frac{7}{10}x = \frac{13}{2} && | :(-\frac{7}{10}) \\ &\Rightarrow x = -\frac{65}{7} \end{aligned}$$

$$\begin{aligned} 6) \quad 3x - 7 &= \frac{1}{2}x + a && | -\frac{1}{2}x \\ &\Rightarrow \frac{5}{2}x - 7 = a && | +7 \\ &\Rightarrow \frac{5}{2}x = a + 7 && | : \frac{5}{2} \\ &\Rightarrow x = \frac{2(a + 7)}{5} \end{aligned}$$