

Lösungen zu den Übungen zu lineare Gleichungen

$2x = 6$	$2x = 6 \quad /:2$ $\Leftrightarrow x = 3$
$x + 4 = 8$	$x + 4 = 8 \quad /-4$ $\Leftrightarrow x = 4$
$3x - 6 = 9$	$3x - 6 = 9 \quad /+6$ $\Leftrightarrow 3x = 15 \quad /:3$ $\Leftrightarrow x = 5$
$-4x + 8 = 12$	$-4x + 8 = 12 \quad /-8$ $\Leftrightarrow -4x = 4 \quad /:(-4)$ $\Leftrightarrow x = -1$
$5x + 7 = -3$	$5x + 7 = -3 \quad /-7$ $\Leftrightarrow 5x = -10 \quad /:5$ $\Leftrightarrow x = -2$
$-8x + 6 = -10$	$-8x + 6 = -10 \quad /-6$ $\Leftrightarrow -8x = -16 \quad /:(-8)$ $\Leftrightarrow x = 2$
$-4 - 5x = -20$	$-4 - 5x = -20 \quad /+4$ $\Leftrightarrow -5x = -16 \quad /:(-5)$ $\Leftrightarrow x = \frac{16}{5} = 3,2$
$-3x - 12 = 15$	$-3x - 12 = 15 \quad /+12$ $\Leftrightarrow -3x = 27 \quad /:(-3)$ $\Leftrightarrow x = -9$
$\frac{2}{3}x + 4 = \frac{4}{9}$	$\frac{2}{3}x + 4 = \frac{4}{9} \quad /-4$ $\Leftrightarrow \frac{2}{3}x = \frac{4}{9} - 4$ $\Leftrightarrow \frac{2}{3}x = \frac{4}{9} - \frac{36}{9} = -\frac{32}{9} \quad / \cdot \frac{3}{2}$ $\Leftrightarrow x = -\frac{32}{9} \cdot \frac{3}{2} = -\frac{16}{3}$
$\frac{5}{8}x - \frac{7}{12} = \frac{2}{4}$	$\frac{5}{8}x - \frac{7}{12} = \frac{2}{4} \quad /+\frac{7}{12}$ $\Leftrightarrow \frac{5}{8}x = \frac{2}{4} + \frac{7}{12} = \frac{6}{12} + \frac{7}{12} = \frac{13}{12} \quad / \cdot \frac{8}{5}$ $\Leftrightarrow x = \frac{13}{12} \cdot \frac{8}{5} = \frac{26}{15}$
$-\frac{3}{16}x - \frac{5}{8} = -\frac{1}{4}$	$-\frac{3}{16}x - \frac{5}{8} = -\frac{1}{4} \quad /+\frac{5}{8}$ $\Leftrightarrow -\frac{3}{16}x = -\frac{1}{4} + \frac{5}{8} = -\frac{2}{8} + \frac{5}{8} = \frac{3}{8} \quad / \cdot \left(-\frac{16}{3}\right)$ $\Leftrightarrow x = \frac{3}{8} \cdot \left(-\frac{16}{3}\right) = -2$