**Gleichungen mit Bruchzahlen**

Löse folgende Bruchgleichungen und schreibe die Lösungsmenge.

(HN ist der Hauptnenner.)

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| (1) $3\frac{1}{2} - \frac{7}{4}x=9\frac{3}{4}+ \frac{1}{3}x$ HN: 12 $\frac{7}{2} - \frac{7}{4}x=\frac{39}{4}+ \frac{1}{3}x$ |· 12 42 – 21x = 117 + 4x | -4x -42 -25x = 75 |:(-25) x = - 3 L = {-3} | (2) $\frac{2}{3}x -1 \frac{2}{5}=2\frac{1}{2}- \frac{3}{2}x$ HN: 30 $\frac{2}{3}x - \frac{7}{5}=\frac{5}{2}- \frac{3}{2}x$ |· 30 20x – 42 = 75 – 45x |+45x+42 65x = 117 |:65 x = 1,8 L = {1,8} |

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| (3) $\frac{7}{6} \left( \frac{1}{3}x+3\right)+ \frac{1}{3}x= \frac{1}{3}$ HN: 18 $\frac{7}{18}x + \frac{21}{6}+ \frac{1}{3}x= \frac{1}{3}$ |· 18  7x + 63 + 6x = 6 |T 13x + 63 = 6 |-63 13x = -57 |:13 x = -$4\frac{5}{13}$ L = {-$4\frac{5}{13}$} | (4)$ \frac{6}{5} \left( \frac{9}{2}x-\frac{4}{5}\right)- \frac{1}{2}x=3 \frac{47}{50}$ HN: 50 $\frac{54}{10}x- \frac{24}{25}- \frac{1}{2}x=3 \frac{47}{50}$ |· 50270x – 48 – 25x = 197 |T 245x – 48 = 197 |+48 245x = 245 |:245 x = 1 L = {1} |

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| (5) 6(4x + 1,6) - 2,71x = 158,63 24x + 9,6 – 2,71x = 158,63 |T 21,29x + 9,6 = 158,63 |- 9,6 21,29x = 149,03 |: 21,29 x = 7 L = {7} |

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| (6) 9(5,82x + 6) - 5,5x = 429,04 52,38x + 54 – 5,5x = 429,04 |T 46,88x + 54 = 429,04 |- 54 46,88x = 375,04 |:46,88 x = 8 L = {8} |