QA 1984 I/1

Löse die Gleichung:

$$1\frac{2}{3}x - 7(3-x) = 5(\frac{2}{5}x + 8) - (x + 15)$$

$$\frac{5}{3}x - 21 + 7x = 2x + 40 - x - 15$$ Zusammenfassen

$$7\frac{5}{3}x - 21 = x + 25$$ / -x

$$7\frac{2}{3}x - 21 = +25$$ / + 21

$$7\frac{2}{3}x = 46$$ / : $7\frac{2}{3}$

x = 6

QA 1984 II/1

$$\frac{x+4}{5} - (\frac{x}{6} + 3) = 4x - \frac{40x-7}{10}$$ / Klammer auflösen

$$\frac{x+4}{5} - \frac{x}{6} - 3 = 4x - \frac{40x-7}{10}$$ / Hauptnenner · 30

$$\frac{30(x+4)}{5} - 30 \cdot \frac{x}{6} - 3 \cdot 30 = 30 \cdot 4x - \frac{30(40x-7)}{10}$$

6 (x + 4) - 5x - 90 = 120x - 3(40x - 7)

6x + 24 - 5x - 90 = 120x - 120x + 21 / Zusammenfassen

x - 66 = 21 / + 66

x = 87

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QA 1984 V/1

$$6x+\frac{2}{5}-2(2x+\frac{1}{2})+4-\frac{1}{5}x=7$$

$$6x+\frac{2}{5}-4x-1+4-\frac{1}{5}x=7$$ / Hauptnenner · 5

30 x + 2 – 20x – 5 + 20 – x = 35 / Zusammenfassen

9x +17 = 35 / - 17

9x = 18 / : 2

x = 2

QA 1985 I/1

$$\frac{2}{5}(20x-25)-(x+36)=\frac{5x-10}{3}$$ (QS = 8)

$$8x-10-x-36=\frac{5x-10}{3}$$ / Zusammenfassen

$$7x-46=\frac{5x-10}{3}$$ / Hauptnenner · 3

21x – 138 = 5x – 10 / - 5x

16x – 138 = -10 / + 138

16x = 128 / : 16

x = 8

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QA 1985 II/1

$$8(x+3)-\frac{40x-2}{5}=42-4(\frac{x}{2}+2)-\frac{8}{5}$$ (QS = 4)

$$8x+24-\frac{40x-2}{5}=42-2x-8-\frac{8}{5}$$ / Hauptnenner · 5

40x + 120 – 40x + 2 = 210 – 10x – 40 – 8 / Zusammenfassen

122 =162 – 10x / + 10x

10x + 122 = 162 / - 122

10x = 40 / : 4

x = 4

QA 1985 III/1

$$\frac{7x-18}{2}-3x=\frac{2x-4}{6}-\frac{1}{8}(4x-16)+3$$

$$\frac{7x-18}{2}-3x=\frac{2x-4}{6}-\frac{1}{2}x+2+3$$ / Hauptnenner · 6

$$\frac{6(7x-18)}{2}-3x\cdot 6=\frac{6(2x-4)}{6}-\frac{1}{2}x\cdot 6+5\cdot 6$$ / Kürzen

3(7x – 18) - 18x = 2x – 4 - 3x + 30 / Zusammenfassen

21x – 54 - 18x = 26 – x / + x

4x - 54 = 26 / + 54

4x = 80 / : 4

x = 20

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QA 1986 I/1

$$2(x+5)+\frac{1}{8}x=3x-\frac{3(x-5)}{4}$$ (QS = 5)

$$2x+10+\frac{1}{8}x=3x-\frac{3x-15)}{4}$$ / Hauptnenner · 8

$$16x+80+x=24x-2(3x-15)$$ / Klammer ausmultiplizieren

17x + 80 = 24x - 6x + 30 / Zusammenfassen

17x + 80 = 18x + 30 / - 17x

80 = x + 30 / - 30

50 = x

QA 1986 III/1

$$\frac{3}{4}(3x-8)+\frac{5-x}{8}=2-\frac{4x-7}{5}$$

$$\frac{9}{4}x-6+\frac{5-x}{8}=2-\frac{4x-7}{5}$$ / Hauptnenner · 40

90x - 240 + 5(5-x) = 80 – 8(4x – 7)

90x - 240 + 25 – 5x = 80 – 32 x + 56 / Zusammenfassen

85x -215 = 136 – 32x / + 32x

117x – 215 = 136 / + 215

117x = 351 / : 117

x = 3

QA 1986 IV/1

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$$\frac{2x-1}{4}-\frac{2x-3{,}5}{6}=\frac{1{,}4x+15}{12}-\frac{3{,}5x-7{,}5}{15}$$ / Hauptnenner · 60

$$\frac{60(2x-1)}{4}-\frac{60(2x-3{,}5)}{6}=\frac{60(1{,}4x+15)}{12}-\frac{60(3{,}5x-7{,}5)}{15}$$

15(2x – 1) - 10(2x – 3,5) = 5(1,4x + 15) - 4(3,5x – 7,5)

30x - 15 - 20x + 35 = 7x + 75 - 14x + 30

10x + 20 = - 7x + 105 / + 7x

17x +20 = 105 / - 20

17x = 85 / : 17

x = 5

QA 1987 I/1

$$\frac{1}{3}(2x+3)-\frac{3x+8}{4}=\frac{5}{6}-(2x-2)$$

$$\frac{2}{3}x+1-\frac{3x+8}{4}=\frac{5}{6}-2x+2$$ / Hauptnenner · 12

$$8x+12-\frac{12(3x+8)}{4}=10-24x+24$$

8x + 12 - 3(3x + 8) = 34 – 24x

8x + 12 - 9x – 24 = 34 – 24x / Zusammenfassen

-x – 12 = 34 – 24x / + 24x

23x – 12 = 34 / + 12

23x = 46 / : 23

x = 2

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