Mathe DEV

1. a) $-14a-(7-2a)+3=$

$-14a-7+2a+3=$

$-12a-4$

b) $-14b-(-7+2b)+(-3)-(8b-4)=$

$-14b+7-2b-3-8b+4=$

$-24b+8$

c) $152y+(72y-48):8-(10y-6)=$ Distributiv Gesetz

$152y+9y-6-10y+6$

$151y$

d) $28b-(-47a-25b+12)-2a+31\cdot 3a=$

$28b+47a+25b-12-2a+93a=$

$53b+138a-12$

e) $(35x-42):(-7)-(10{,}5+7{,}5x):(-5)=$

$-5x+6-(-2{,}1-1{,}5x)=$

$-5x+6+2{,}1+1{,}5x=$

$-3{,}5x+8{,}1$

f) $\frac{1}{4}(-4x+12)-\frac{1}{2}(5x+14)+(-3x)=$

$-x+3-2{,}5x-7-3x=$

$-6{,}5x-4$

3. a) $5x-(x-4)=2(x+16)$

b) $\left(\frac{1}{3}x+\frac{1}{4}x+\frac{1}{6}x+\frac{1}{12}x\right)=2x-5\cdot 1{,}4$

c) $(x-3)\cdot 6-5=\frac{1}{2}(5x-11)$

→

4. a) $(x-3)\cdot(-8)-(-12)=5x-(2x-3)$

$-8x+24+12=5x-2x+3$

$-8x+36=3x+3$

$-8x-3x=3-36$

$-11x=-33$

$x=3$

b) $1{,}2(16x-8)-3{,}6(3x+9)=2{,}4(4x-16)-9{,}6$

$19{,}2x-9{,}6-10{,}8x-32{,}4=9{,}6x-38{,}4-9{,}6$

$8{,}4x-42=9{,}6x-48 \quad |-9{,}6x+42$

$-1{,}2x=-6$

$x=5$

5. a) $U=2a+2b \quad |-2b$

$U-2b=2a \quad |:2$

$\frac{U-2b}{2}=a$

b) $A=\frac{1}{2}gh \quad |\cdot 2$

$2A=g\cdot h \quad |:g$

$\frac{2A}{g}=h$