

# Mathe DEU

$$1. \text{ a) } -14a - (7 - 2a) + 3 =$$

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

$$-12a - 4$$

$$\text{b) } -14b - (-7 + 2b) + (-3) - (8b - 4) =$$

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

$$-24b + 8$$

$$\text{c) } 152y + (\overbrace{72y - 48}^{\text{Distributiv Gesetz}}) : 8 - (10y - 6) =$$

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

$$151y$$

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

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

$$53b + 138a - 12$$

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

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

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

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

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

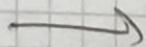
$$-x + 3 - 2,5x - 7 - 3x =$$

$$-6,5x - 4$$

$$3. \text{ a) } 5x - (x - 4) = 2(x + 16)$$

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

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



$$\begin{aligned}
 4. \quad a) \quad & (x-3) \cdot (-8) - (-12) = 5x - (2x-3) \\
 & -8x + 24 + 12 = 5x - 2x + 3 \\
 & -8x + 36 = 3x + 3 \\
 & -8x - 3x = 3 - 36 \\
 & -11x = -33 \\
 & x = 3
 \end{aligned}$$

$$\begin{aligned}
 b) \quad & 1,2(16x-8) - 3,6(3x+9) = 2,4(4x-16) - 9,6 \\
 & 19,2x - 9,6 - 10,8x - 32,4 = 9,6x - 38,4 - 9,6 \\
 & 8,4x - 42 = 9,6x - 48 \quad | -9,6x + 42 \\
 & -1,2x = -6 \\
 & x = 5
 \end{aligned}$$

$$\begin{aligned}
 5. \quad a) \quad & U = 4a + 2b \quad | -2b \\
 & U - 2b = 2a \quad | :2 \\
 & \frac{U - 2b}{2} = a
 \end{aligned}$$

$$\begin{aligned}
 b) \quad & A = \frac{1}{2}gh \quad | \cdot 2 \\
 & 2A = g \cdot h \quad | :g \\
 & \frac{2A}{g} = h
 \end{aligned}$$