

Beispiele

06.11.2020

126.

$$a) \frac{x-1}{2} - \frac{x+1}{2} - \frac{1-x}{2} - \frac{1+x}{2} + 2 = 0 \quad | \cdot 2$$

$$2 \cdot \frac{x-1}{2} - 2 \cdot \frac{x+1}{2} - 2 \cdot \frac{1-x}{2} - 2 \cdot \frac{1+x}{2} + 2 \cdot 2 = 0$$

$$x-1-x-1-1+x-1-x+4=0$$

$$-4+4=0$$

$$0=0$$

$x \in \mathbb{R}$

$$b) \frac{4x+4}{3} - \frac{3x-1}{4} = \frac{5x+1}{7} \quad | \cdot 84$$

$$28 \cdot \frac{4x+4}{3} - 21 \cdot \frac{3x-1}{4} = 12 \cdot \frac{5x+1}{7}$$

$$28 \cdot (4x+4) - 21 \cdot (3x-1) = 12 \cdot (5x+1)$$

$$112x + 112 - 63x + 21 = 60x + 12$$

$$112x - 63x - 60x = 12 - 112 - 21$$

$$-11x = -121$$

$$x = 11$$

127.

$$a) (3a-2):2 = (2a-1):3$$

$$\frac{3a-2}{2} = \frac{2a-1}{3} \quad | \cdot 6$$

$$3 \cdot \frac{3a-2}{2} = 2 \cdot \frac{2a-1}{3}$$

$$3 \cdot (3a-2) = 2 \cdot (2a-1)$$

$$9a-6 = 4a-2$$

$$9a-4a = 6-2$$

$$5a = 4$$

$$a = \frac{4}{5}$$

$$\delta) (x+1) : (x+3) = (x-3) : (x-2)$$

$$(x+1) \cdot (x-2) = (x+3) \cdot (x-3)$$

$$x^2 - 2x + x - 2 = \underbrace{x^2}_{\leftarrow} - 9$$

$$\cancel{x^2} - 2x + x - \cancel{x^2} = -9 + 2$$

$$-2x + x = -7$$

$$-x = -7 \quad / \cdot (-1)$$

$$x = 7$$

DOMÄNE: 121. f), 122. a), δ)