Gleichungen, Ungleichungen, Bruchgleichungen

Bestimme Definitions- und Lösungsmenge!

$$\mathbb{G} = \mathbb{Q}$$

$$5(7+x)=3(8+8x)-141$$

$$(9+x)(15+x)=(3+x)(5+x)$$

$$5x-4<51-6x$$

$$\frac{4x-5}{9x-5}=\frac{4(2x-4)}{18x-26}$$

$$-2(1-3x)>80+(-3x-8)$$

$$(2x-2)(2x+2)\geq(x-3)(x+5)+3x^2$$

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

$$(x-0,1)^2+(x+0,2)^2=(x-0,1)(x+0,1)+(x-0,2)^2$$

Lösungen:

$\mathbb{D} = \mathbb{Q} \setminus \{\ 1;\ 2\ \}$ $\mathbb{D} = \mathbb{Q} \setminus \left\{\frac{5}{9};\frac{13}{9}\right\}$

$\mathbb{IL} = \{\ 5\ \}$ $\mathbb{IL} = \{\ 1,5\ \}$

$\mathbb{IL} = \{\ x \mid x \leqq 5,5\ \}$ $\mathbb{IL} = \{\ x \mid x > 8\ \}$

$\mathbb{IL} = \{\ 8\ \}$ $\mathbb{IL} = \{\ x \mid x < 5\ \}$

$\mathbb{IL} = \{\ -7,5\ \}$ $\mathbb{IL} = \left\{-\frac{1}{30}\right\}$