

2. Stegreifarbeit Mathematik am _____Klasse: **8a** Name: _____

Thema: lineare Gleichungen

1. Berechne die Lösungsmenge folgender Gleichungen.

a)

$$\square 2x - 5 = 3 + 6x$$

$$\triangle -4x - 5 = 3$$

$$\triangle -4x = 8$$

$$\triangle x = -2$$

b)

$$\square 4(x - 5) + 3 = 9 - 5(6 - x)$$

$$\triangle 4(x - 5) + 3 = 9 + (5x - 30)$$

$$\triangle (4x - 20) + 3 = 9 + (5x - 30)$$

$$\triangle 4x - 17 = 9 + (5x - 30)$$

$$\triangle 4x - 17 = 5x - 21$$

$$\triangle -x - 17 = -21$$

$$\triangle -x = -4$$

$$\triangle x = 4$$

c)

$$\square 3x + 7 - 4x = 5x + 13 - 8x$$

$$\triangle -x + 7 = 5x + 13 - 8x$$

$$\triangle -x + 7 = -3x + 13$$

$$\triangle 2x + 7 = 13$$

$$\triangle 2x = 6$$

$$\triangle x = 3$$

d)

$$\square 48x^2 + 55x + 9 = (5 + 12x) \cdot 4x - 17x - 4$$

$$\triangle 48x^2 + 55x + 9 = (48x^2 + 20x) - 17x - 4$$

$$\triangle 48x^2 + 55x + 9 = 48x^2 + 3x - 4$$

$$\triangle 55x + 9 = 3x - 4$$

$$\triangle 52x + 9 = -4$$

$$\triangle 52x = -13$$

$$\triangle x = -\frac{1}{4}$$