

Lösungen ex 5. 58/1/2

$$1. a) 2x - 1 \leq 5 \quad | +1$$

$$2x \leq 6 \quad | :2$$

$$x \leq 6$$

$$\mathbb{L} = \{ \dots, 3, 4, 5, 6 \}$$

$$c) 3x - 2 \cdot (3 - x) > 4$$

$$3x - 6 + 2x > 4 \quad | +6$$

$$5x > 10 \quad | :5$$

$$x > 2$$

$$\mathbb{L} = \{ 3, 4, 5, \dots \}$$

$$b) 2 \cdot (1 - 2x) \geq 4 \cdot (x - 2)$$

$$2 - 4x \geq 4x - 8 \quad | +4x + 8$$

$$30 \geq 8x \quad | :8$$

$$\frac{15}{4} \geq x \quad \mathbb{L} = \{ \dots, -1, 0, 1, 2, 3 \}$$

$$2. a) \frac{1}{2}x + 2 \leq 3 \quad | +2$$

$$\frac{1}{2}x \leq 5 \quad | \cdot 2$$

$$x \leq 10$$

$$\mathbb{L} = \{ \dots, 7, 8, 9, 10 \}$$

$$c) -\frac{2}{3}x - 2 \leq \frac{2}{3}x \quad | +\frac{2}{3}x$$

$$-2 \leq \frac{4}{3}x \quad | \cdot \frac{3}{4}$$

$$-\frac{3}{2} \leq x$$

$$\mathbb{L} = \{ -1, 0, 1, 2, \dots \}$$

$$b) 2x + 3 > -x \quad | -2x$$

$$3 > -3x \quad | :(-3)$$

$$-1 < x$$

$$\mathbb{L} = \{ 0, 1, 2, 3, \dots \}$$

$$d) -\frac{5}{3}x - 2 < -\frac{1}{3}x + 2 \quad | +\frac{1}{3}x + 2$$

$$-\frac{22}{15}x < 4 \quad | \cdot (-\frac{15}{22})$$

$$x > -\frac{30}{11}$$

$$\mathbb{L} = \{ -2, -1, 0, 1, 2, \dots \}$$