

T7 NIMITTÄJÄ YHTÄLÖSSÄ

NIMITTÄJÄ YHTÄLÖSSÄ s. 95

ESIM1

$$\text{a)} \quad \frac{2x+7}{3} = 1 \quad || \cdot 3$$

$$2x+7 = 3 \quad || -7$$

$$2x = -4 \quad || :2$$

$$x = -2$$

$$\text{b)} \quad 2 = \frac{3x-5}{4} \quad || \cdot 4$$

$$2 \cdot 4 = 3x-5$$

$$8 = 3x-5 \quad || +5$$

$$13 = 3x \quad || :3$$

$$\frac{13}{3} = x$$

$$x = \frac{13}{3} \approx 4,3$$

$$\text{c)} \quad \frac{3x+4}{5} = \frac{x+4}{3} \quad || \text{kerrotaan ristiin}$$

$$3(3x+4) = 5(x+4)$$

$$9x+12 = 5x+20 \quad || -5x$$

$$4x+12 = 20 \quad || -12$$

$$4x = 8 \quad || :4$$

$$x = 2$$

Sivu 95

506.

$$\text{a)} \quad \frac{x+4}{5} = 3 \quad || \cdot 5$$

$$x+4 = 15 \quad || -4$$

$$x = 11$$

$$\text{b)} \quad \frac{3a+4}{2} = 11 \quad || \cdot 2$$

$$3a+4 = 22 \quad || -4$$

$$3a = 18 \quad || :3$$

$$a = 6$$

$$\text{c)} \quad \frac{14-3x}{5} = 1 \quad || \cdot 5$$

$$14 - 3x = 5 \quad \| \quad -14$$

$$-3x = -9 \quad \| \quad :(-3)$$

$$x = 3$$

$$\text{d) } \frac{5x+4}{7} = 2 \quad \| \cdot 7$$

$$5x+4 = 14 \quad \| \quad -4$$

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

$$x = 2$$

507.

$$\text{a) } 9 = \frac{2x+5}{3} \quad \| \cdot 3$$

$$27 = 2x+5 \quad \| -5$$

$$22 = 2x \quad \| :2$$

$$11 = x$$

$$\text{b) } \frac{6-y}{20} = 4 \quad \| \cdot 20$$

$$6-y = 80 \quad \| -6$$

$$-y = 74 \quad \| :(-1)$$

$$y = -74$$

$$\text{c) } \frac{2x-1}{5} = -3 \quad \| \cdot 5$$

$$2x-1 = -15 \quad \| +1$$

$$2x = -14 \quad \| :2$$

$$x = -7$$

$$\text{d) } 4 = \frac{5-x}{2} \quad \| \cdot 2$$

$$8 = 5-x \quad \| +x$$

$$x+8 = 5 \quad \| -8$$

$$x = -3$$

508

$$\text{a) } \frac{x}{2} = \frac{x+6}{4} \quad \| \text{ker rotaan ristiin}$$

$$4x = 2(x+6)$$

$$4x = 2x+12 \quad \| -2x$$

$$2x = 12 \quad \| :2$$

$$x = 6$$

$$\text{b) } \frac{3x-2}{8} = \frac{x+1}{4} \quad \parallel \text{ ker rotaan ristiin}$$

$$4(3x-2) = 8(x+1)$$

$$12x - 8 = 8x + 8 \quad \parallel -8x$$

$$4x - 8 = 8 \quad \parallel +8$$

$$4x = 16 \quad \parallel :4$$

$$x = 4$$

$$\text{c) } \frac{y+3}{2} = \frac{4y}{6} \quad \parallel \text{ ker rotaan ristiin}$$

$$6(y+3) = 8y$$

$$6y + 18 = 8y \quad \parallel -6y$$

$$18 = 2y \quad \parallel :2$$

$$9 = y$$

$$\text{d) } \frac{2y+3}{5} = \frac{4-y}{10} \quad \parallel \text{ ker rotaan ristiin}$$

$$10(2y+3) = 5(4-y)$$

$$20y + 30 = 20 - 5y \quad \parallel +5y$$

$$25y + 30 = 20 \quad \parallel -30$$

$$25y = -10 \quad \parallel :25$$

$$y = -\frac{10}{25} = -\frac{2}{5}$$