

T6 SULKEET YHTÄLÖSSÄ 2

492.

$$\text{a) } 6(3 - 2y) = 2(7 - y)$$

$$18 - 12y = 14 - 2y \quad || + 2y$$

$$18 - 10y = 14 \quad || - 18$$

$$-10y = -4 \quad || : (-10)$$

$$y = \frac{-4}{-10} = \frac{2}{5} = 0,4$$

$$\text{b) } 2(4 - x) = 5(1 - x)$$

$$8 - 2x = 5 - 5x \quad || - 8$$

$$-2x = -3 - 5x \quad || + 5x$$

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

$$x = -1$$

$$\text{c) } 2(5x + 1) = 4(2x + 3)$$

$$10x + 2 = 8x + 12 \quad || - 8x$$

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

$$2x = 10 \quad || : 2$$

$$x = 5$$

$$\text{d) } 7(x + 2) = 4(x + 5)$$

$$7x + 14 = 4x + 20 \quad || - 4x$$

$$3x + 14 = 20 \quad || - 14$$

$$3x = 6 \quad || : 3$$

$$x = 2$$

493.

$$\text{a) } 3(5x - 2) = 4(3x + 6)$$

$$15x - 6 = 12x + 24 \quad || - 12x$$

$$3x - 6 = 24 \quad || + 6$$

$$3x = 30 \quad || : 3$$

$$x = 10$$

$$\text{b) } -2(x - 1) = 3(3 - x)$$

$$-2x + 2 = 9 - 3x \quad || + 3x$$

$$x + 2 = 9 \quad || - 2$$

$$x = 7$$

$$\text{c) } 10x - 1 = 2(3 + 4x)$$

$$10x - 1 = 6 + 8x \quad || -8x$$

$$2x - 1 = 6 \quad || +1$$

$$2x = 7 \quad || :2$$

$$x = \frac{7}{2} = 3,5$$

$$d) \quad 3(8m - 9) = 7(2m - 5)$$

$$24m - 27 = 14m - 35 \quad || -14m$$

$$10m - 27 = -35 \quad || +27$$

$$10m = -8 \quad || :10$$

$$m = -\frac{8}{10} = -\frac{4}{5} \approx -0,8$$

494.

$$a) \quad 2(5 - x) = 11 - 5x$$

$$10 - 2x = 11 - 5x \quad || +5x$$

$$10 + 3x = 11 \quad || -10$$

$$3x = 1 \quad || :3$$

$$x = \frac{1}{3} \approx 0,33$$

$$b) \quad -3(2 - y) = 3y - 6$$

$$-6 + 3y = 3y - 6 \quad || -3y$$

$$-6 = -6 \quad \text{tämä on aina totta eli ratkaisu on kaikki luvut}$$

$$c) \quad 7(2x - 3) = 4x + 15$$

$$14x - 21 = 4x + 15 \quad || -4x$$

$$10x - 21 = 15 \quad || +21$$

$$10x = 36 \quad || :10$$

$$x = \frac{36}{10} = \frac{18}{5} = 3,6$$

$$d) \quad -5(3 - 2y) = 5y + 25$$

$$-15 + 10y = 5y + 25 \quad || -5y$$

$$-15 + 5y = 25 \quad || +15$$

$$5y = 40 \quad || :5$$

$$y = 8$$

