

$$\Leftrightarrow 13x + 20x - 8 = -8 \quad \Leftrightarrow 33x = 0 \quad | :33 \quad \Leftrightarrow \underline{x=0}$$

$$\Rightarrow y = 5 \cdot 0 - 2 \quad \Leftrightarrow \underline{y = -2}$$

Par2.
$$\begin{cases} -15 \cdot 0 + 3 \cdot (-2) = -6 & \Leftrightarrow -6 = -6 \checkmark \\ 13 \cdot 0 + 4 \cdot (-2) = -8 & \Leftrightarrow -8 = -8 \checkmark \end{cases}$$

4.5
$$\begin{cases} 4x + 5y - 2 = 0 \\ 2y - x - 6 = 0 \end{cases} \quad \begin{matrix} \swarrow \text{rj.} \\ \Rightarrow 2y - 6 = x \\ \searrow \text{rj.} \end{matrix} \quad 6, 12, 17$$

$$\Rightarrow 4 \cdot (2y - 6) + 5y - 2 = 0$$

$$\Leftrightarrow 8y - 24 + 5y - 2 = 0$$

$$\Leftrightarrow 13y = 26 \quad | :13 \quad \Leftrightarrow \underline{y = 2} \quad \Rightarrow \underline{x = 2 \cdot 2 - 6 = -2}$$

4.6
$$\begin{cases} x + 8y = 19 \\ x - y = -2 \end{cases} \quad \begin{matrix} \swarrow \text{rj.} \\ \Rightarrow x = y - 2 \\ \searrow \text{rj.} \end{matrix}$$

$$\Rightarrow (y - 2) + 8y = 19$$

$$\Leftrightarrow 9y = 21 \quad | :9 \quad \Leftrightarrow \underline{y = \frac{21}{9} = \frac{7}{3}}$$

$$\Rightarrow \underline{x = \frac{7}{3} - 2 = \frac{7}{3} - \frac{6}{3} = \frac{1}{3}}$$

TA1:
$$\begin{cases} x + 8y = 19 \\ x - y = -2 \end{cases} \quad | \cdot (-1) \quad \Leftrightarrow \begin{cases} x + 8y = 19 \\ -x + y = 2 \end{cases}$$

$$9y = 21 \quad | :9 \quad \Leftrightarrow \underline{y = \frac{21}{9} = \frac{7}{3}}$$

$$\Rightarrow x - \frac{7}{3} = -2 \quad \Leftrightarrow \underline{x = \frac{7}{3} - 2 = \frac{1}{3}}$$

4.12 kalvi: x , leivos: y
 2 kummetonta \Rightarrow keretaan 2 yhtälöä

$$\begin{cases} 5x + 5y = 27,50 \\ 8x + 10y = 50,80 \end{cases} \quad | \cdot (-2) \quad \Leftrightarrow \begin{cases} -10x - 10y = -55 \\ 8x + 10y = 50,80 \end{cases}$$

$$\underline{-2x = -4,2} \quad | :(-2) \quad \Leftrightarrow \underline{x = 2,1}$$

$$5 \cdot 2,1 + 5y = 27,50 \quad \Leftrightarrow y = 3,4$$

Vast. kalvi: 2,1 e, leivos: 3,4 e