



## SOUSTAVA DVOU LINEÁRNÍCH ROVNIC

## SE DVĚMA NEZNÁMÝMI

(M-V-09-08)

Vypočítej soustavy rovnic:

1) I.  $3x + 7y = 52$

II.  $5x - 4y = 24 \implies 5x = 24 + 4y \quad /:5$

$$x = \frac{24 + 4y}{5} \quad (\text{dosadím za } x \text{ do 1. rovnice})$$

$$3x + 7y = 52 \implies 3 \cdot \frac{24 + 4y}{5} + 7y = 52 \quad / \cdot 5$$

$$3 \cdot (24 + 4y) + 35y = 260$$

$$72 + 12y + 35y = 260 \quad / -72$$

$$47y = 188 \quad /:47$$

$$\underline{\underline{y = 4}} \quad (\text{dosadím za } y)$$

$$x = \frac{24 + 4y}{5} = \frac{24 + 4 \cdot 4}{5} = \frac{24 + 16}{5} = \frac{40}{5} = \underline{\underline{8}}$$

**Zk: I.**  $L = 3 \cdot 8 + 7 \cdot 4 = 24 + 28 = \mathbf{52}$

$P = \mathbf{52} \qquad \qquad \qquad \mathbf{L = P}$

**II.**  $L = 5 \cdot 8 - 4 \cdot 4 = 40 - 16 = \mathbf{24}$

$P = \mathbf{24} \qquad \qquad \qquad \mathbf{L = P}$

## INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

$$2) \quad 2x + 7y = -8 \quad \Longrightarrow \quad 2x = -8 - 7y \quad /:2$$

$$5x - 2y = 19 \quad x = \frac{-8 - 7y}{2} \quad (\text{dosadím za } x \text{ do 2. rovnice})$$

$$5x - 2y = 19 \quad \Longrightarrow \quad 5 \cdot \frac{-8 - 7y}{2} - 2y = 19 \quad /:2$$

$$5 \cdot (-8 - 7y) - 4y = 38$$

$$-40 - 35y - 4y = 38 \quad /+40$$

$$-39y = 78 \quad /: (-39)$$

$$\underline{\underline{y = -2}} \quad (\text{dosadím za } y)$$

$$x = \frac{-8 - 7y}{2} = \frac{-8 - 7 \cdot (-2)}{2} = \frac{-8 + 14}{2} = \frac{6}{2} = \underline{\underline{3}}$$

**Zk.:** I.  $L = 2 \cdot 3 + 7 \cdot (-2) = 6 - 14 = -8$

$$P = -8$$

$$L = P$$

II.  $L = 5 \cdot 3 - 2 \cdot (-2) = 15 + 4 = 19$

$$P = 19$$

$$L = P$$