1.

$$\sum_{\substack{i<n \\ i \text{ sudé}}} x_i^2$$

2.

$$I_4 = \begin{pmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & 0 & 1 \end{pmatrix}$$

3.

$$|x| = \begin{cases} x & x \geq 0 \\ -x & x \leq 0 \end{cases}$$

4.

$$\begin{multline} a+b+c+d+e+f+b+c+d+e+f+b+c+d+e+f \\ +b+c+d+e+f+b+c+d+e+f+i+j+k+l+m+n \end{multline}$$

5.

$$\begin{gather} a+b=c+d \\ \qquad\quad x=w+y+z \\ m+n+o+p=q \qquad\qquad \end{gather}$$

6.

$$\begin{aligned} a_{11}x_1 + a_{12}x_2 + a_{13}x_3 & & &= y_1, \\ a_{21}x_1 + a_{22}x_2 & & + a_{24}x_4 &= y_2, \\ a_{31}x_1 & + a_{33}x_3 & + a_{34}x_4 &= y_3. \end{aligned}$$

7.

$$\begin{aligned} a+b+c+d \qquad &= 0, \\ c+d+e &= 5. \end{aligned}$$

8.

$$x_1 + y_1 + \left( \sum_{i<5} \binom{5}{i} + a^2 \right)^2$$

$$\left( \sum_{i<5} \binom{5}{i} + \alpha^2 \right)^2$$

9.

$$\begin{aligned} \alpha &= \alpha\alpha \\ \beta &= \beta\beta\beta\beta\beta \\ \gamma &= \gamma \end{aligned} \qquad \text{versus} \qquad \begin{aligned} \delta &= \delta\delta \\ \eta &= \eta\eta\eta\eta\eta\eta \\ \varphi &= \varphi \end{aligned}$$

10.

$$\begin{aligned} a &= b + c - d \\ &\quad + e - f \\ &= g + h \\ &= i \end{aligned} \tag{1}$$