

Работа над ошибками

с1(2)

$$1) -\frac{9}{64} \Rightarrow \text{преобразовать } \frac{9}{64}$$

$$\frac{9}{64} - \frac{1}{2} < 0 \Rightarrow 2^{-2} \left( \frac{1}{2} + 0 + 0 \right) = \frac{1}{8}$$

ошибка -  $\frac{10}{64}$   
дополнение

$$4) -15 \Rightarrow 2^3 \left( \frac{1}{2} + \frac{1}{4} + \frac{1}{8} \right) = 7 \Rightarrow |7| < |-15| \Rightarrow f(-15) = \infty$$

$$3) \frac{23}{256} < \frac{1}{8} \Rightarrow f\left(\frac{23}{256}\right) = 0$$

с1(3)

$$\eta_{\frac{9}{64}} = \left[ \left| \frac{9}{2} - \frac{9}{64} \right| = \left| \frac{10}{64} - \frac{9}{64} \right| = \frac{1}{64} \right]$$

$$\eta_{\frac{23}{256}} = \frac{23}{256} \vee \left| UFL - \frac{23}{256} \right| = \frac{9}{256}$$

$$\eta_{-15} = \infty \vee |OFL - 15| = 8$$

$$\eta_{\frac{9}{16}} = \left[ \begin{array}{l} \left| \frac{1}{2} - \frac{9}{16} \right| = \frac{1}{8} \\ \left| \frac{5}{8} - \frac{9}{16} \right| = \frac{1}{8} \end{array} \right]$$



т 2(3)

Выполни 3 итерации

ПВР:

$$1) \begin{pmatrix} -0,74 \\ -0,79 \end{pmatrix}$$

$$2) \begin{pmatrix} 0,074 \\ -1,11 \end{pmatrix}$$

$$3) \begin{pmatrix} 0,06 \\ -1,01 \end{pmatrix}$$

Зейделя:

$$1) \begin{pmatrix} -0,56 \\ -0,70 \end{pmatrix}$$

$$2) \begin{pmatrix} -0,17 \\ -0,99 \end{pmatrix}$$

$$3) \begin{pmatrix} -0,05 \\ -0,97 \end{pmatrix}$$

Гauss:

$$1) \begin{pmatrix} -0,57 \\ -1 \end{pmatrix}$$

$$2) \begin{pmatrix} -0,17 \\ -0,7 \end{pmatrix}$$

$$3) \begin{pmatrix} -0,17 \\ -1 \end{pmatrix}$$

т 2(2)

$$A \begin{pmatrix} x \\ y \end{pmatrix} = b \quad A = \begin{pmatrix} 44 & 25 \\ 25 & 48 \end{pmatrix} \quad b = \begin{pmatrix} -25 \\ -48 \end{pmatrix}$$

Итерация Зейделя

$$x_i^{(s+1)} = \sum_{j=1}^{i-1} c_{ij} x_j^{(s+1)} + \sum_{j=i+1}^n c_{ij} x_j^{(s)} + d_i \quad d_i = \frac{b_i}{a_{ii}} \quad c_{ij} = -\frac{a_{ij}}{a_{ii}} \quad 0$$

$$\begin{cases} x^{s+1} = -\frac{a_{12}}{a_{11}} y^s + \left(-\frac{25}{44}\right) + x^s \\ y^{s+1} = -\frac{a_{21}}{a_{22}} x^s + \left(-\frac{48}{48}\right) \end{cases} \quad \begin{cases} x^{s+1} = \\ y^{s+1} = \end{cases}$$

$$y^{s+1} = \frac{a_{21}}{a_{22}} x^{s+1}$$



$$\begin{cases} x^{s+1} = c_{11} x_1^s + c_{12} y^s + d_1 \\ y^{s+1} = c_{21} x^{s+1} + c_{22} y^s + d_2 \end{cases}$$

$$c_{11} = 0$$

$$c_{12} = -\frac{a_{12}}{a_{11}} = -\frac{25}{44} \quad d_1 = \frac{b_1}{a_{11}}$$

$$c_{21} = -\frac{a_{21}}{a_{22}} = -\frac{25}{48} \quad d_2 = \frac{b_2}{a_{22}} =$$

$$\begin{cases} x^{s+1} = -\frac{25}{44} y^s + \frac{25}{44} \\ y^{s+1} = -\frac{25}{48} x^{s+1} + \frac{48}{48} \end{cases}$$

$$\begin{cases} x^{s+1} = -\frac{25}{44} (1 + y^s) \\ y^{s+1} = -\frac{25}{48} x^{s+1} - \frac{48}{48} \end{cases}$$

ПБР:  $\omega = 1,3$

$$\begin{cases} x^{s+1} = (1 - 1,3) x^s + \frac{1,3 \cdot 25}{44} (1 - y^s) \\ y^{s+1} = (1 - 1,3) y^s + \omega \left( -\frac{25}{48} x^{s+1} - 1 \right) \end{cases}$$

$$\begin{cases} x^{s+1} = -0,3 x^s - 0,73 (1 - y^s) \\ y^{s+1} = -0,3 y^s + 1,3 \left( -\frac{25}{48} x^{s+1} - 1 \right) \end{cases}$$