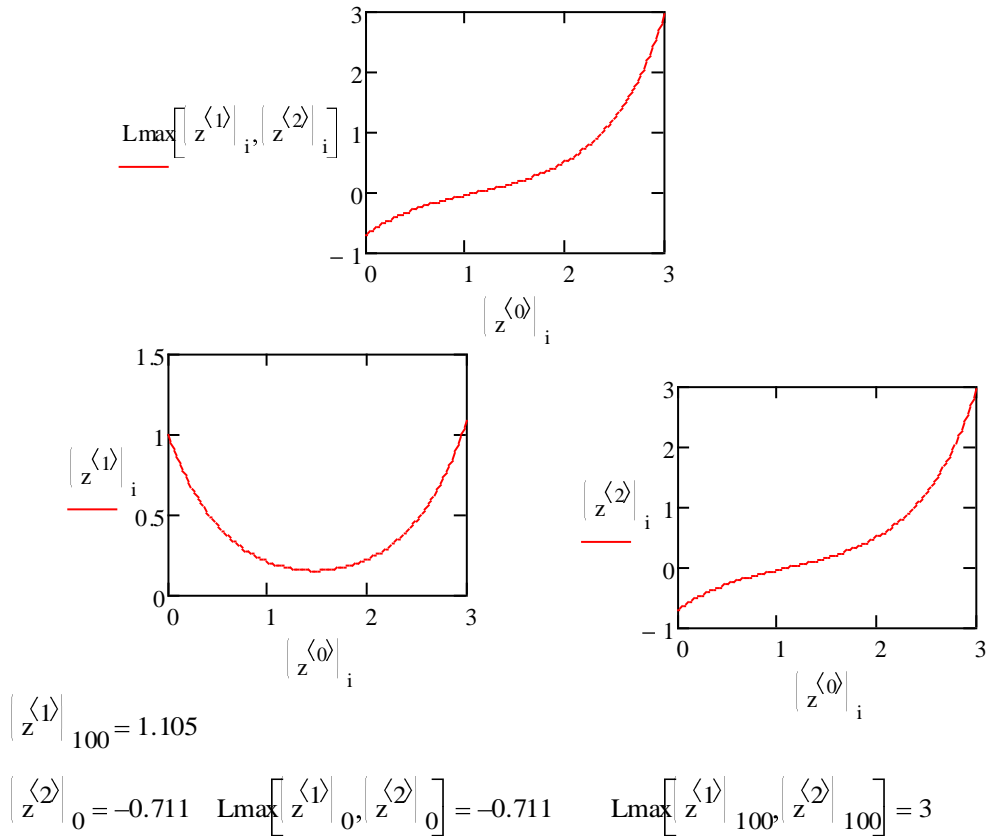
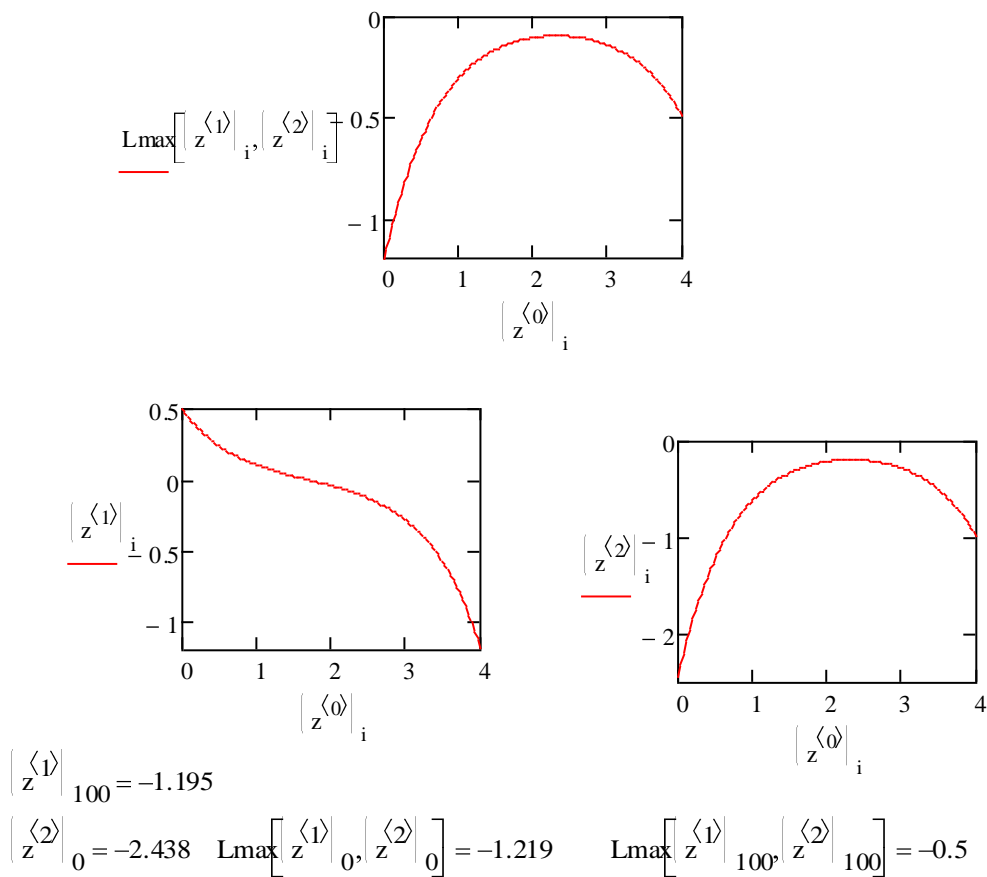


ЛАБОРАТОРНАЯ РАБОТА №1

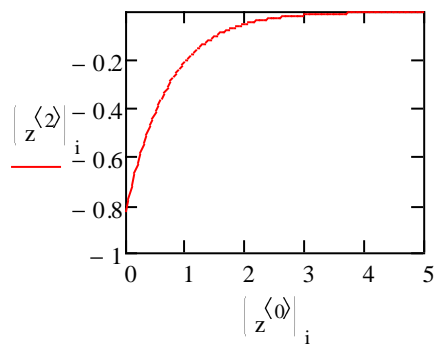
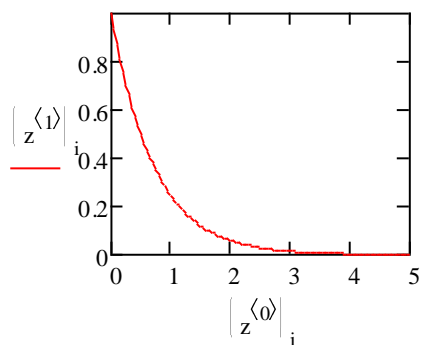
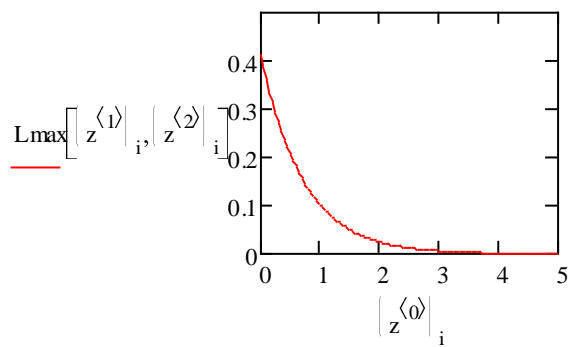
ВАРИАНТ 1



ВАРИАНТ 2



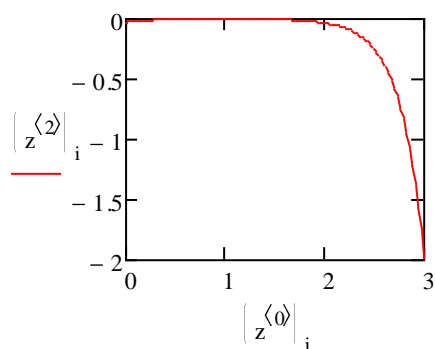
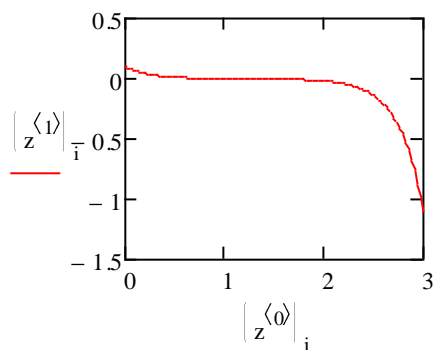
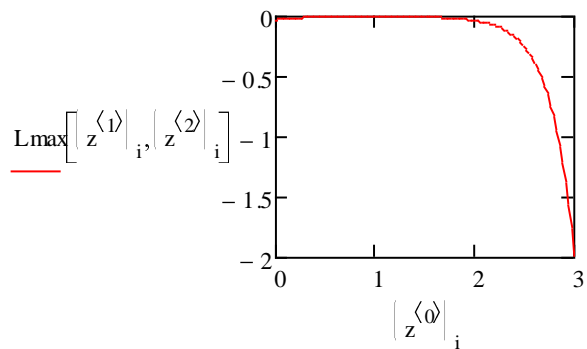
ВАРИАНТ 3



$$\left| z^{\langle 1 \rangle} \right|_{100} = 9.95 \times 10^{-4}$$

$$\left| z^{\langle 2 \rangle} \right|_0 = -0.828 \quad \text{Lmax} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] = 0.414 \quad \text{Lmax} \left[\left| z^{\langle 1 \rangle} \right|_{100}, \left| z^{\langle 2 \rangle} \right|_{100} \right] = 9.898 \times 10^{-10}$$

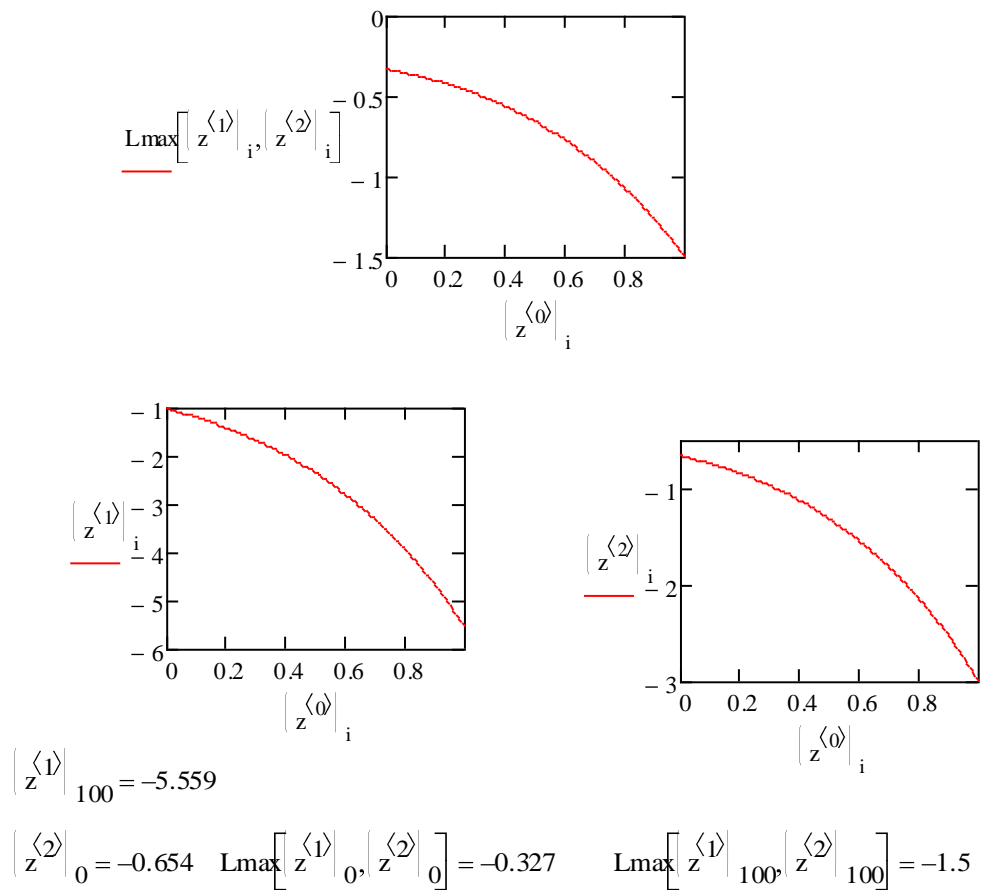
ВАРИАНТ 4



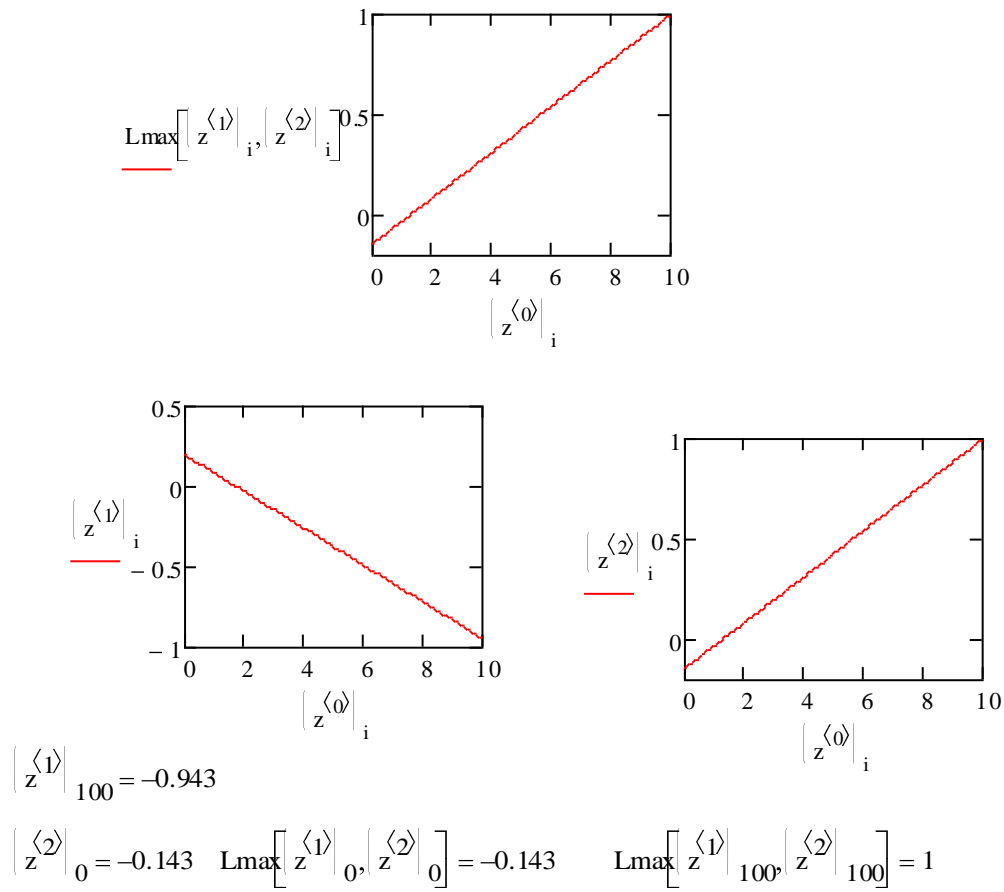
$$\left| z^{\langle 1 \rangle} \right|_{100} = -1.123$$

$$\left| z^{\langle 2 \rangle} \right|_0 = -0.028 \quad \text{Lmax} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] = -0.028 \quad \text{Lmax} \left[\left| z^{\langle 1 \rangle} \right|_{100}, \left| z^{\langle 2 \rangle} \right|_{100} \right] = -2$$

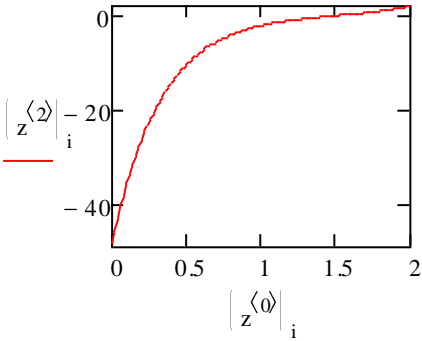
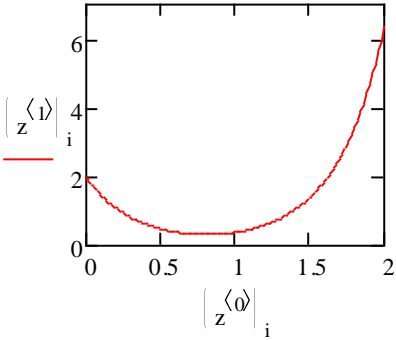
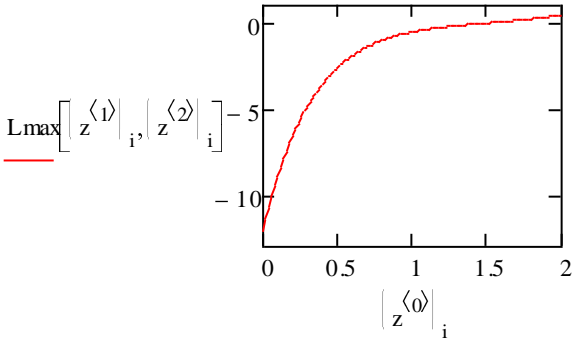
ВАРИАНТ 5



ВАРИАНТ 6



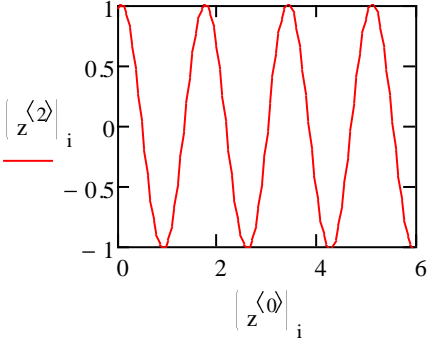
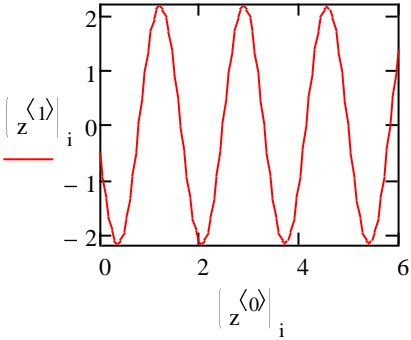
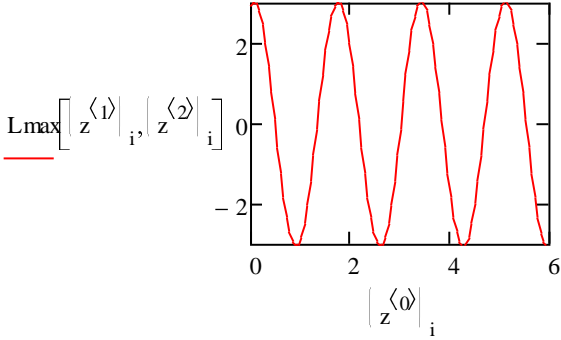
ВАРИАНТ 7



$$\left| z^{\langle 1 \rangle} \right|_{100} = 6.395$$

$$\left| z^{\langle 2 \rangle} \right|_0 = -48.326 \quad L_{\max} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] = -12.082 \quad L_{\max} \left[\left| z^{\langle 1 \rangle} \right|_{100}, \left| z^{\langle 2 \rangle} \right|_{100} \right] = 0.5$$

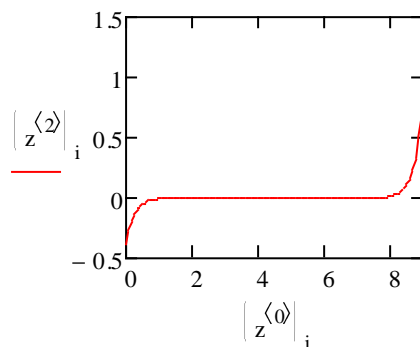
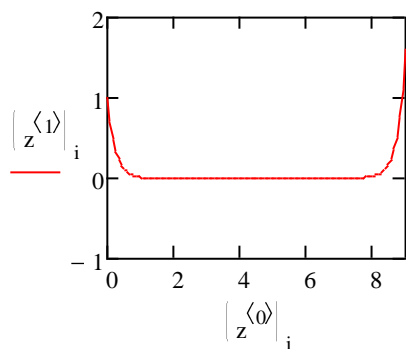
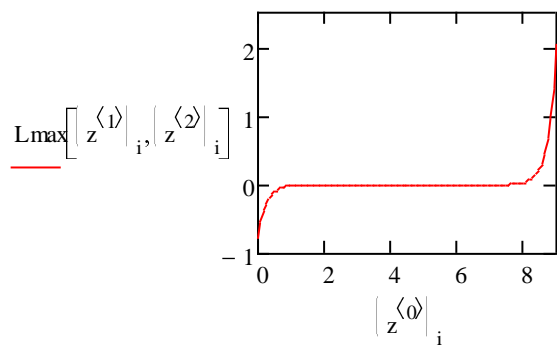
ВАРИАНТ 8



$$\left| z^{\langle 1 \rangle} \right|_{100} = 1.38$$

$$\left| z^{\langle 2 \rangle} \right|_0 = 0.987 \quad L_{\max} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] = 2.96 \quad L_{\max} \left[\left| z^{\langle 1 \rangle} \right|_{100}, \left| z^{\langle 2 \rangle} \right|_{100} \right] = -3$$

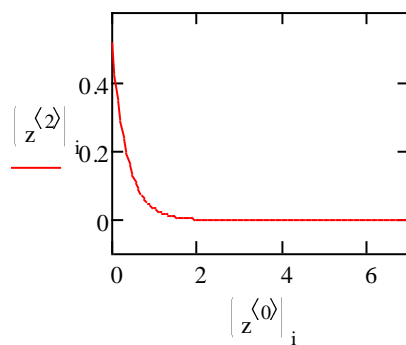
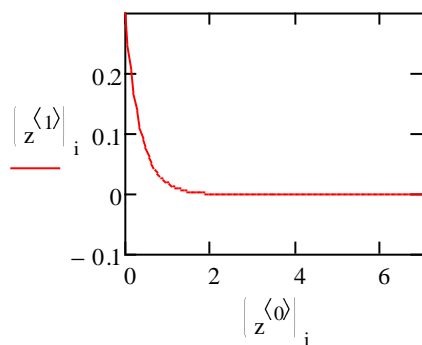
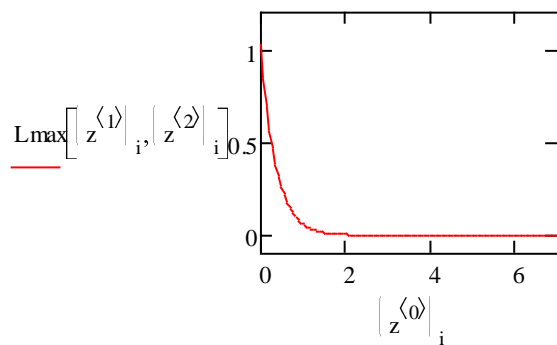
ВАРИАНТ 9



$$\left| z^{\langle 1 \rangle} \right|_{100} = 1.615$$

$$\left| z^{\langle 2 \rangle} \right|_0 = -0.39 \quad \text{Lmax} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] = -0.781 \quad \text{Lmax} \left[\left| z^{\langle 1 \rangle} \right|_{100}, \left| z^{\langle 2 \rangle} \right|_{100} \right] = 2.069$$

ВАРИАНТ 10



$$\left| z^{\langle 1 \rangle} \right|_{100} = -1.267 \times 10^{-7}$$

$$\left| z^{\langle 2 \rangle} \right|_0 = 0.512 \quad \text{Lmax} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] = 1.024 \quad \text{Lmax} \left[\left| z^{\langle 1 \rangle} \right|_{100}, \left| z^{\langle 2 \rangle} \right|_{100} \right] = -7.209 \times 10^{-8}$$

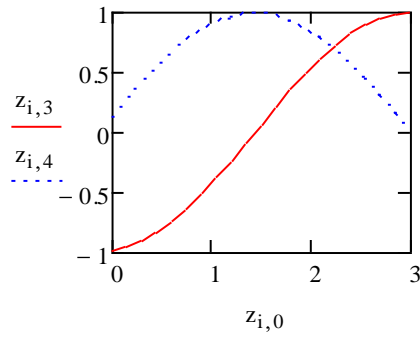
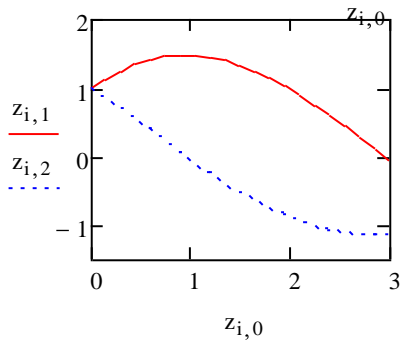
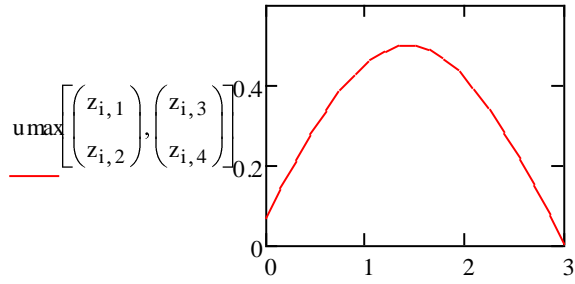
ЛАБОРАТОРНАЯ РАБОТА №2

ВАРИАНТ 1

$$z_{20,1} = -0.064 \quad z_{20,2} = -1.126$$

$$z_{0,3} = -0.99 \quad z_{0,4} = 0.141$$

$$\text{umax} \left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix} \right] = 0.071 \quad \text{umax} \left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix} \right] = 6.277 \times 10^{-6}$$

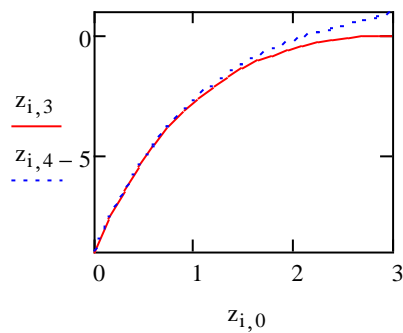
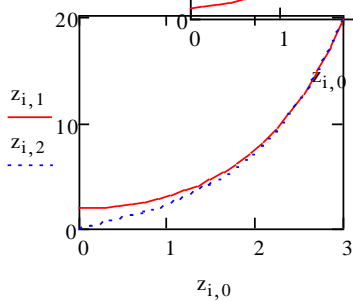
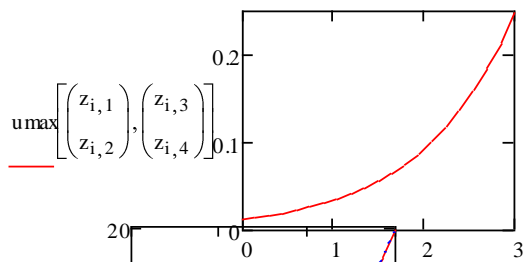


ВАРИАНТ 2

$$z_{20,1} = 20.01 \quad z_{20,2} = 20.16$$

$$z_{0,3} = -9.068 \quad z_{0,4} = -9.018$$

$$\text{umax} \left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix} \right] = 0.012 \quad \text{umax} \left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix} \right] = 0.25$$

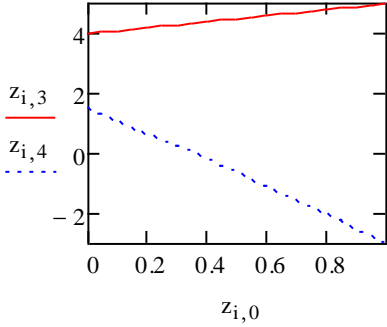
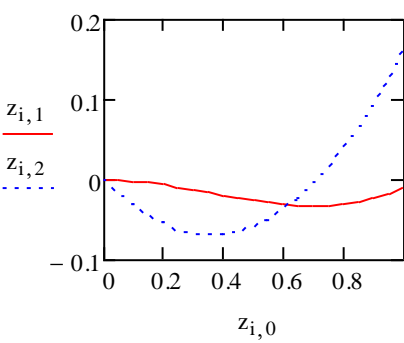
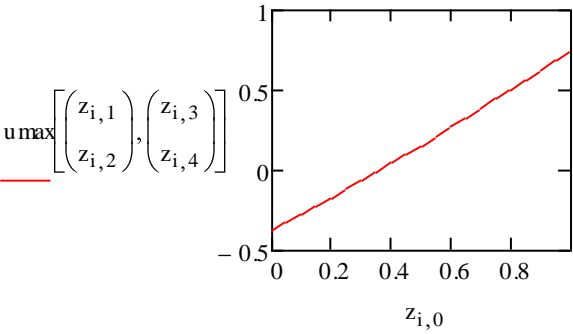


ВАРИАНТ 3

$z_{20,1} = -0.01$ $z_{20,2} = 0.167$

$z_{0,3} = 4$ $z_{0,4} = 1.5$

$$\text{umax}\left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix}\right] = -0.375$$
$$\text{umax}\left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix}\right] = 0.75$$

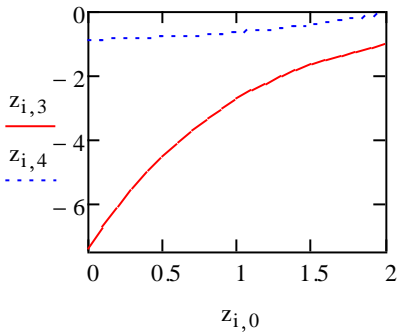
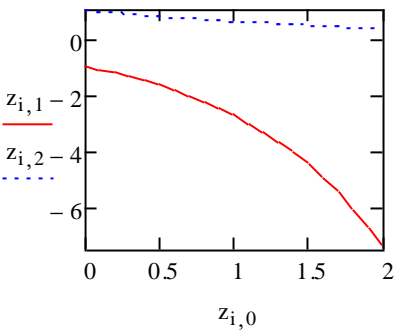
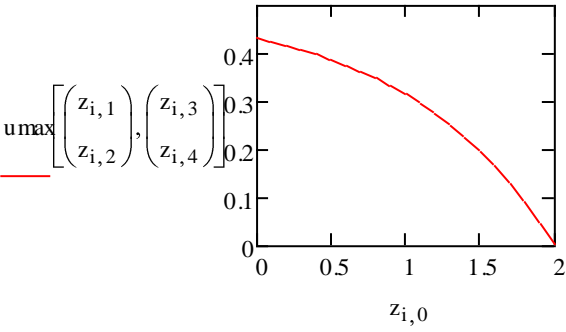


ВАРИАНТ 4

$z_{20,1} = -7.389$ $z_{20,2} = 0.322$

$z_{0,3} = -7.389$ $z_{0,4} = -0.865$

$$\text{umax}\left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix}\right] = 0.432$$
$$\text{umax}\left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix}\right] = 7.668 \times 10^{-7}$$

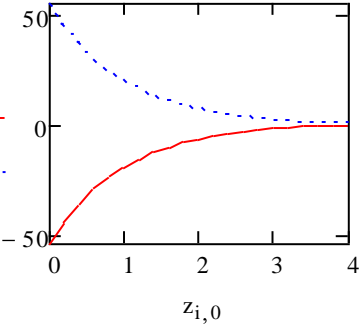
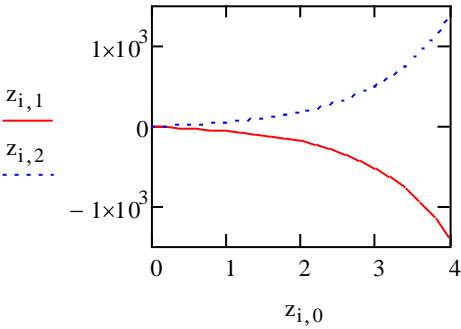
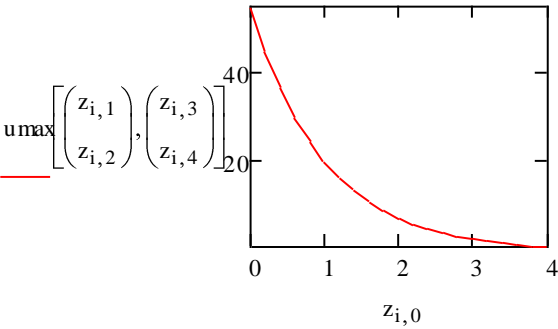


ВАРИАНТ 5

$z_{20,1} = -1.409 \times 10^3$ $z_{20,2} = 1.409 \times 10^3$

$z_{0,3} = -53.598$ $z_{0,4} = 54.598$

$\text{umax}\left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix}\right] = 54.098$ $\text{umax}\left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix}\right] = 0.5$

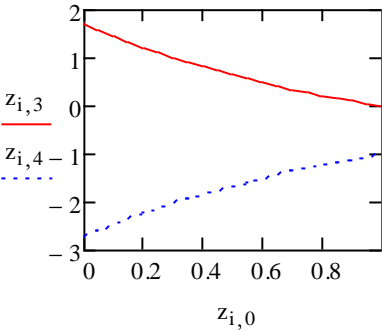
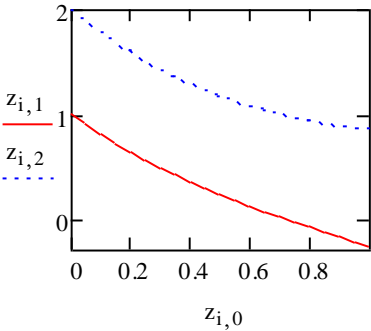
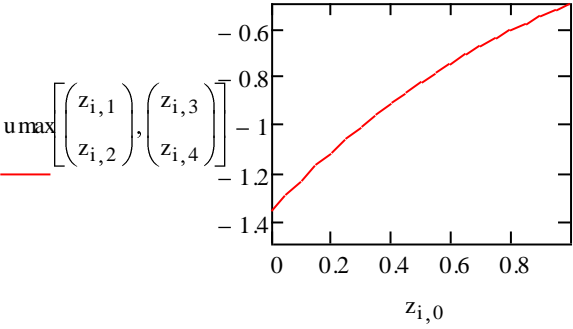


ВАРИАНТ 6

$z_{20,1} = -0.259$ $z_{20,2} = 0.862$

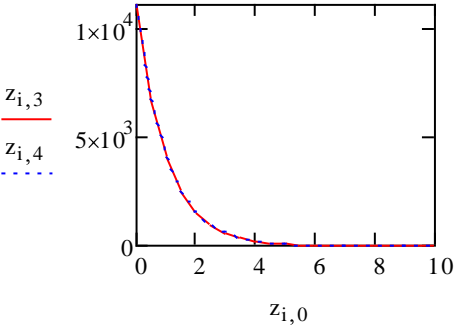
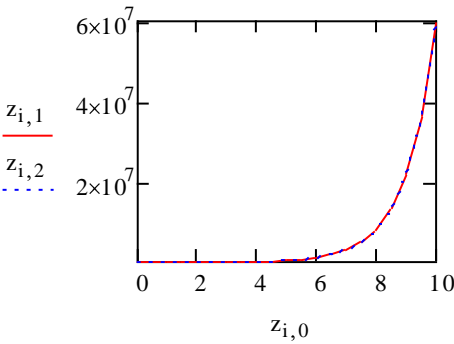
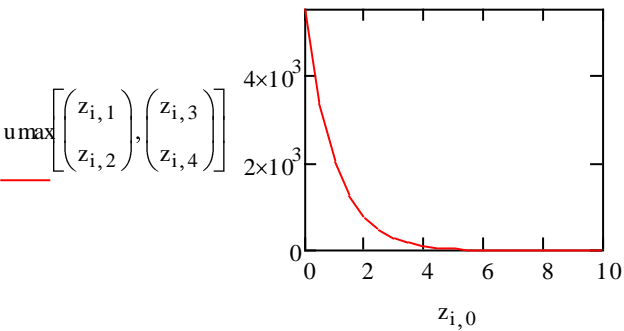
$z_{0,3} = 1.718$ $z_{0,4} = -2.718$

$\text{umax}\left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix}\right] = -1.359$ $\text{umax}\left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix}\right] = -0.5$



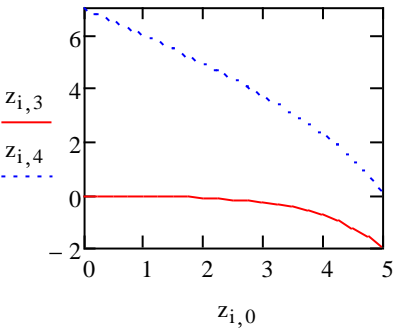
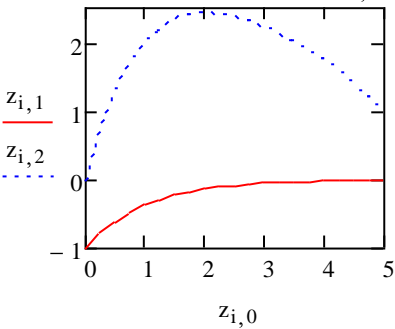
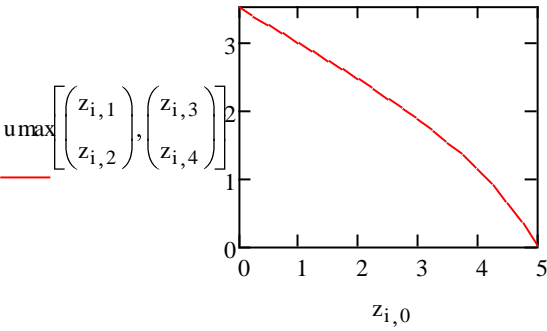
ВАРИАНТ 7

$$z_{20,1} = 3.024 \times 10^7 \qquad z_{20,2} = 3.024 \times 10^7$$
$$z_{0,3} = 1.101 \times 10^4 \qquad z_{0,4} = 1.101 \times 10^4$$
$$\text{umax}\left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix}\right] = 5.506 \times 10^3 \qquad \text{umax}\left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix}\right] = 1.128 \times 10^{-3}$$



ВАРИАНТ 8

$$z_{20,1} = -6.739 \times 10^{-3} \qquad z_{20,2} = 0.973$$
$$z_{0,3} = -0.013 \qquad z_{0,4} = 6.987$$
$$\text{umax}\left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix}\right] = 3.493 \qquad \text{umax}\left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix}\right] = 1.322 \times 10^{-4}$$

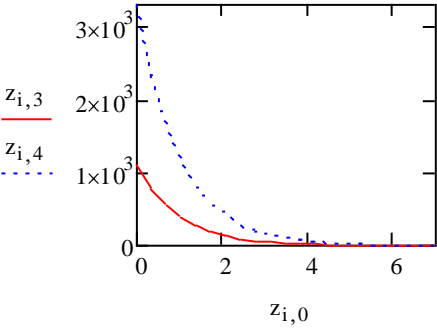
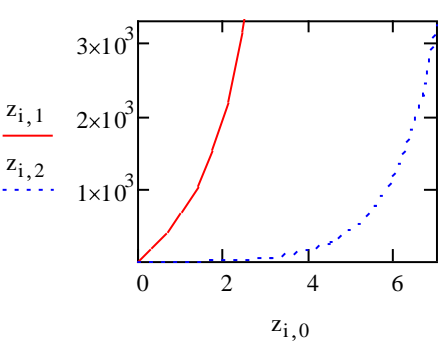
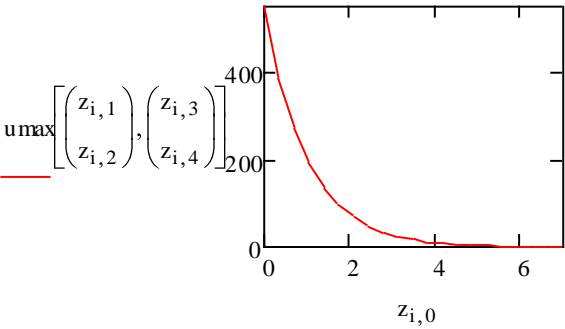


ВАРИАНТ 9

$z_{20,1} = 3.01 \times 10^5$ $z_{20,2} = 3.288 \times 10^3$

$z_{0,3} = 1.096 \times 10^3$ $z_{0,4} = 3.289 \times 10^3$

$$\text{umax}\left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix}\right] = 547.817$$
$$\text{umax}\left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix}\right] = 5.869 \times 10^{-4}$$

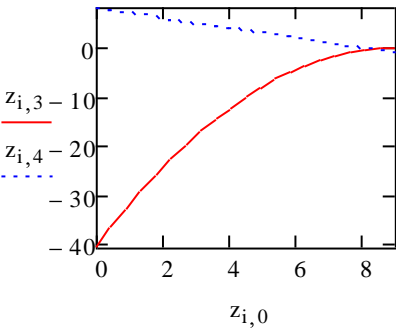
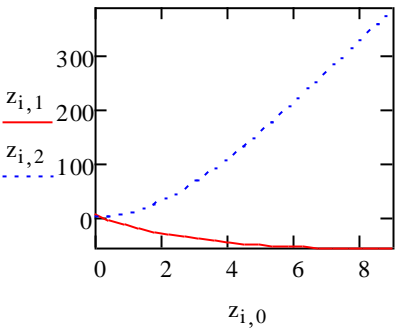
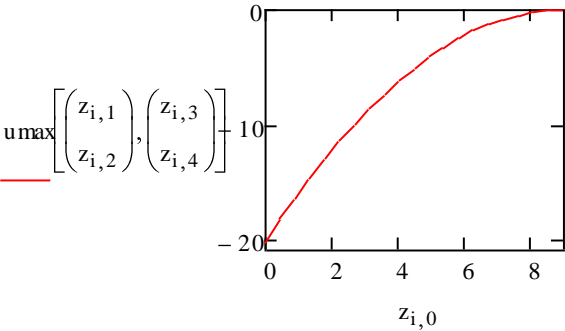


ВАРИАНТ 10

$z_{20,1} = -57.75$ $z_{20,2} = 384.062$

$z_{0,3} = -40.5$ $z_{0,4} = 8$

$$\text{umax}\left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix}\right] = -20.25$$
$$\text{umax}\left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix}\right] = 8.507 \times 10^{-14}$$

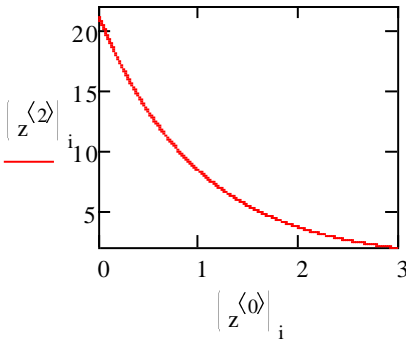
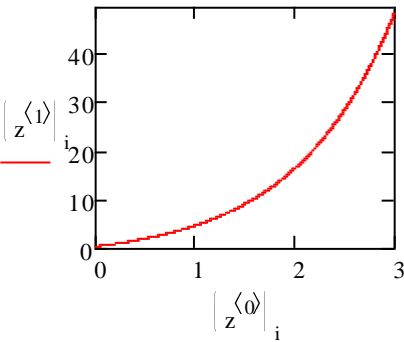
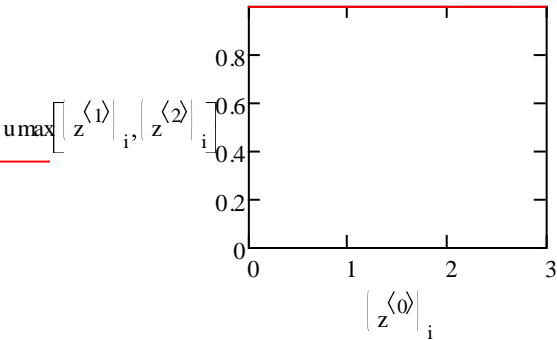


ЛАБОРАТОРНАЯ РАБОТА №3

ВАРИАНТ 1

$$\left|z^{\langle 1 \rangle}\right|_{1000}=48.214$$

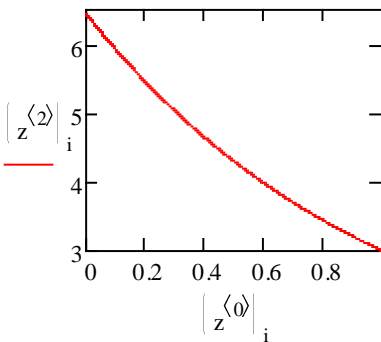
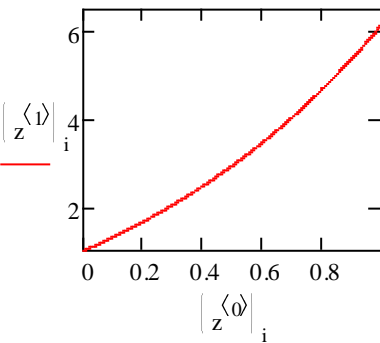
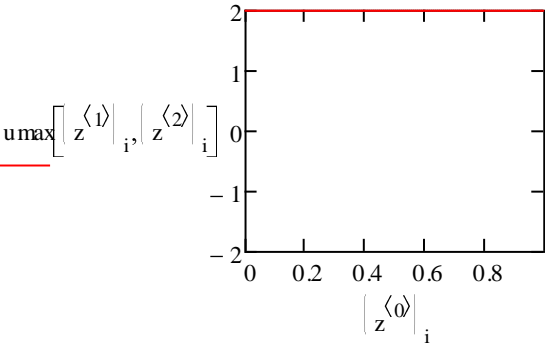
$$\left|z^{\langle 2 \rangle}\right|_0=21.086$$



ВАРИАНТ 2

$$\left|z^{\langle 1 \rangle}\right|_{1000}=6.155$$

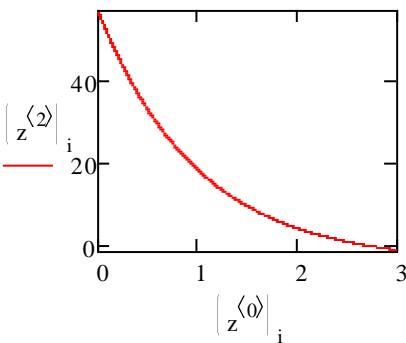
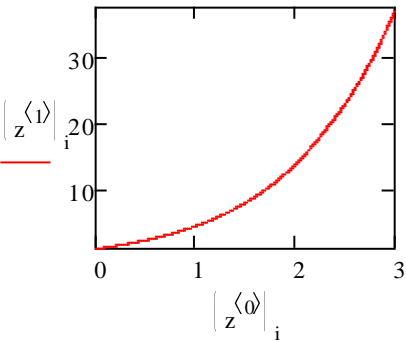
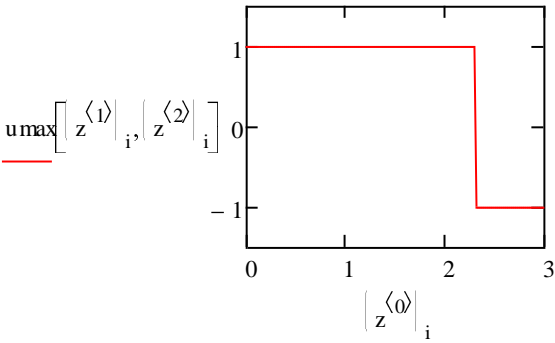
$$\left|z^{\langle 2 \rangle}\right|_0=6.437$$



ВАРИАНТ 3

$$\left|z^{\langle 1 \rangle}\right|_{1000}=37.17$$

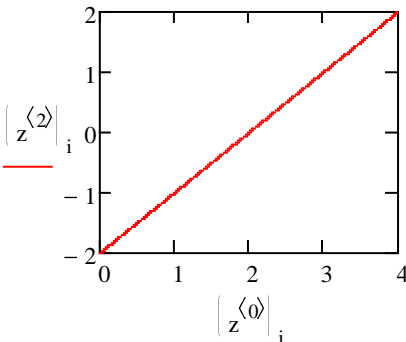
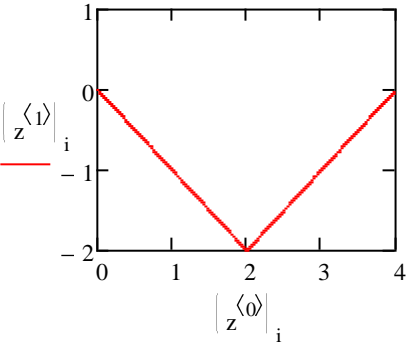
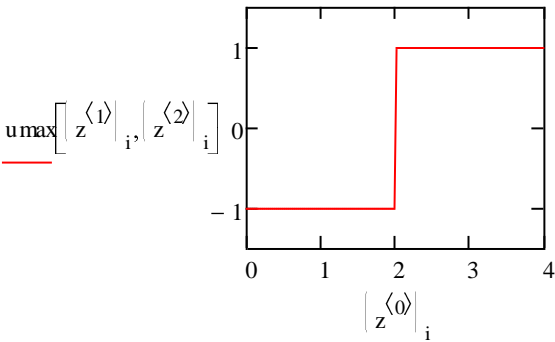
$$\left|z^{\langle 2 \rangle}\right|_0=56.257$$



ВАРИАНТ 4

$$\left|z^{\langle 1 \rangle}\right|_{1000}=1.333\times 10^{-3}$$

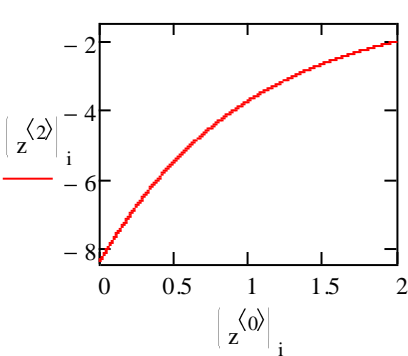
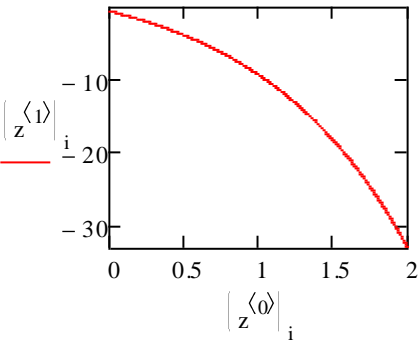
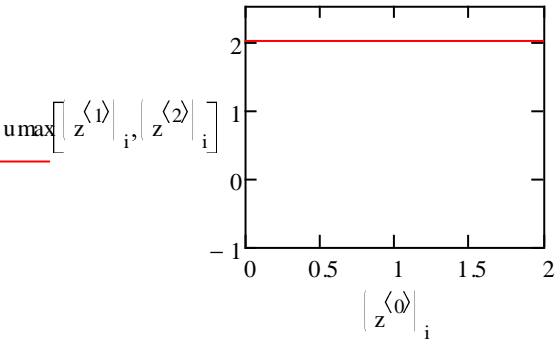
$$\left|z^{\langle 2 \rangle}\right|_0=-2$$



ВАРИАНТ 5

$$\left|z^{\langle 1 \rangle}\right|_{1000}=-32.945$$

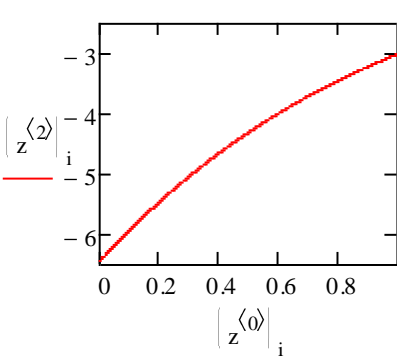
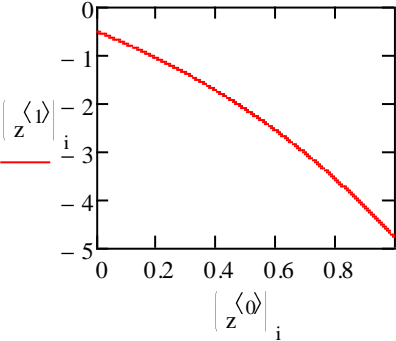
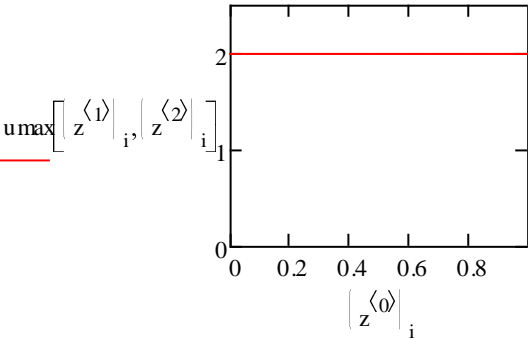
$$\left|z^{\langle 2 \rangle}\right|_0=-8.389$$



ВАРИАНТ 6

$$\left|z^{\langle 1 \rangle}\right|_{1000}=-4.796$$

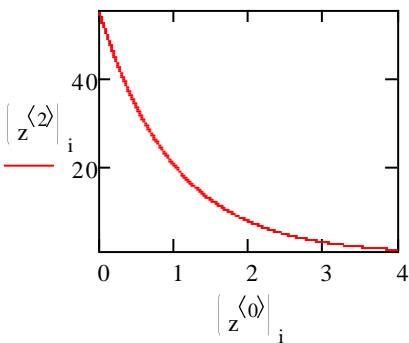
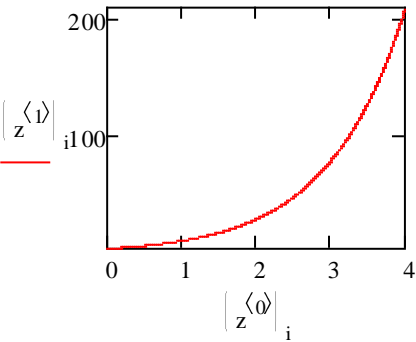
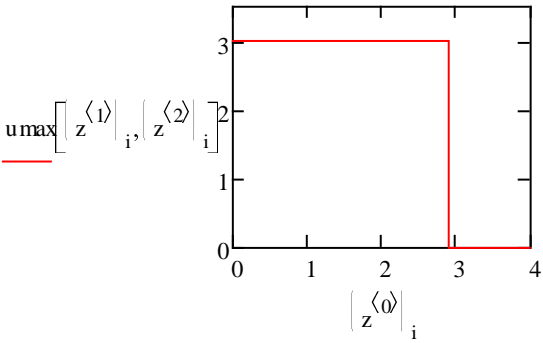
$$\left|z^{\langle 2 \rangle}\right|_0=-6.437$$



ВАРИАНТ 7

$$\left|z^{\langle 1 \rangle}\right|_{1000}=209.386$$

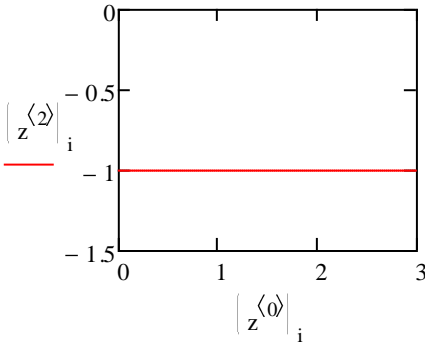
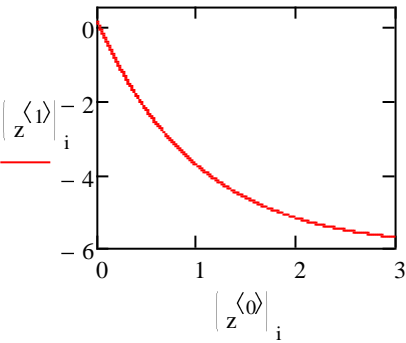
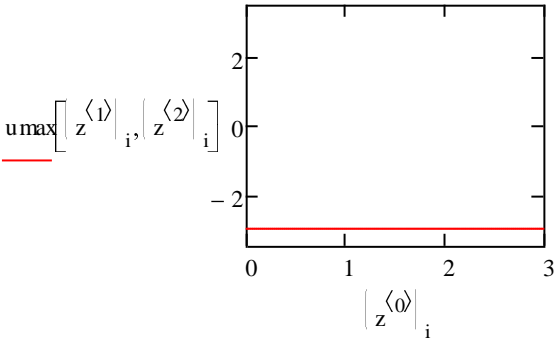
$$\left|z^{\langle 2 \rangle}\right|_0=54.598$$



ВАРИАНТ 8

$$\left|z^{\langle 1 \rangle}\right|_{1000}=-5.696$$

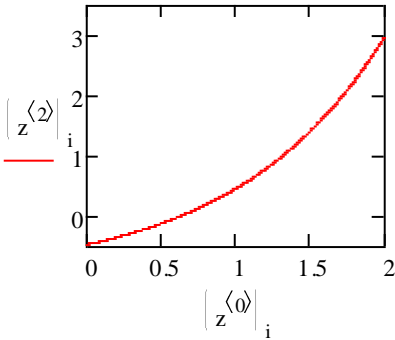
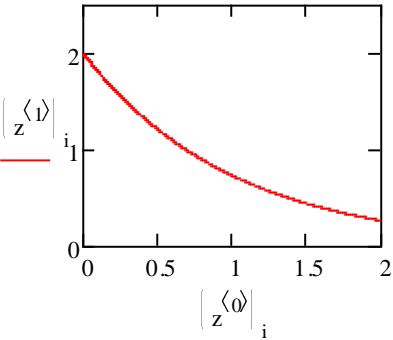
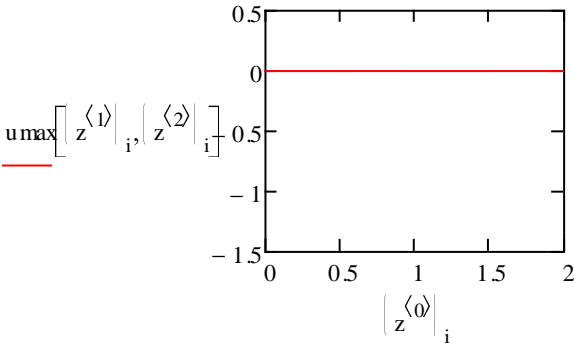
$$\left|z^{\langle 2 \rangle}\right|_0=-1$$



ВАРИАНТ 9

$$\left|z^{\langle 1 \rangle}\right|_{1000}=0.271$$

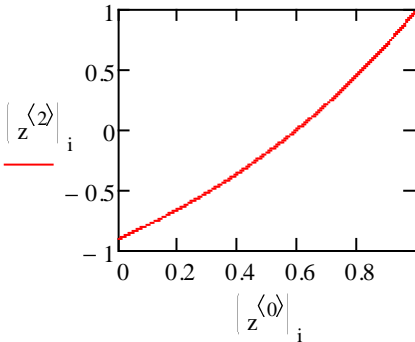
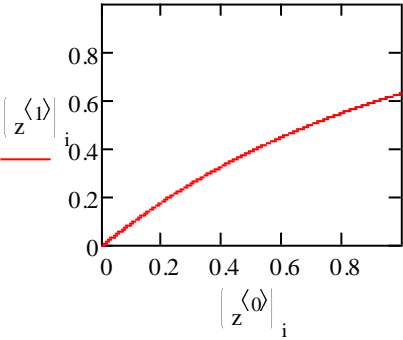
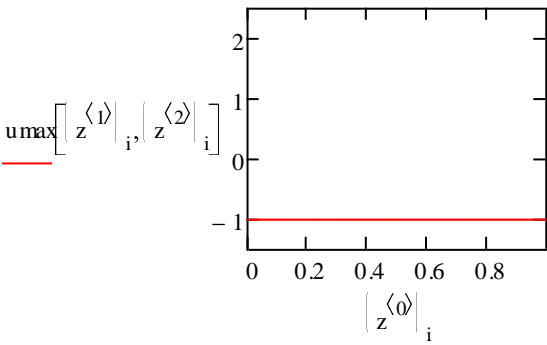
$$\left|z^{\langle 2 \rangle}\right|_0=-0.459$$



ВАРИАНТ 10

$$\left|z^{\langle 1 \rangle}\right|_{1000}=0.632$$

$$\left|z^{\langle 2 \rangle}\right|_0=-0.896$$

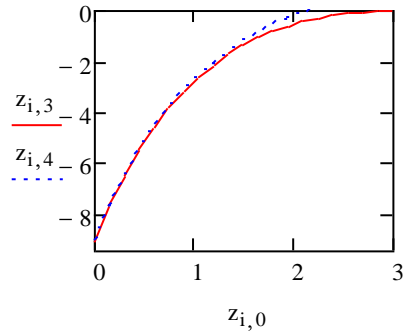
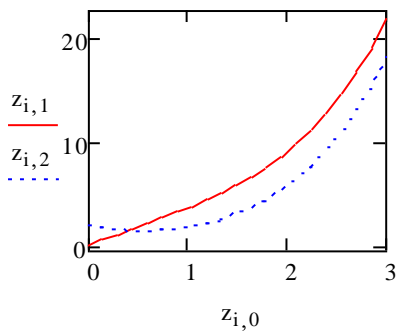
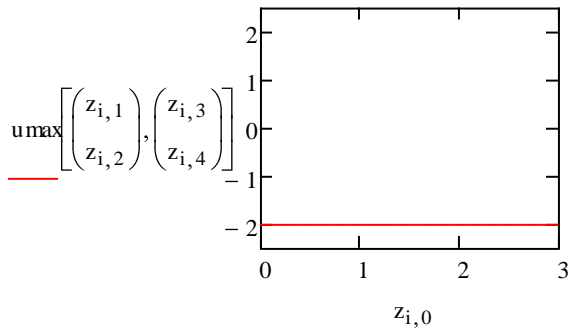


ЛАБОРАТОРНАЯ РАБОТА №4

ВАРИАНТ 1

$$z_{20,1} = 21.937 \quad z_{20,2} = 18.236 \quad z_{0,3} = -9.068 \quad z_{0,4} = -9.018$$

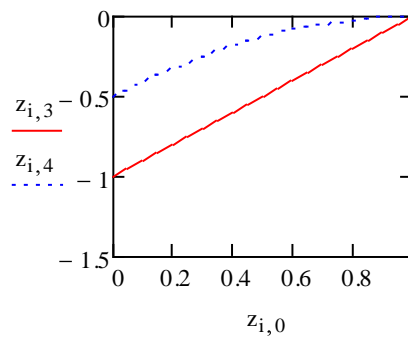
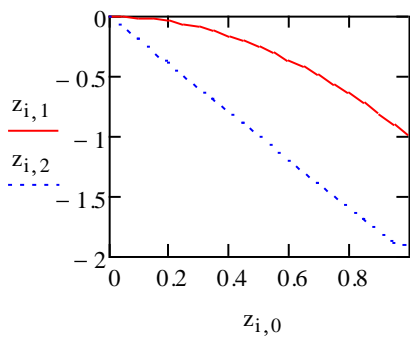
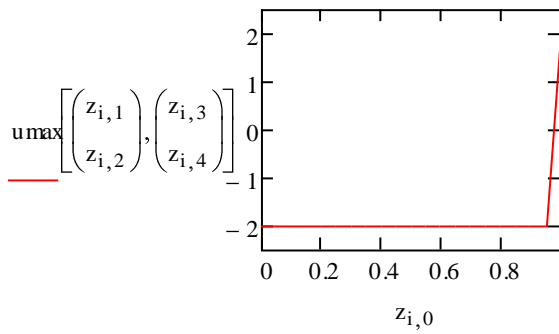
$$\text{umax} \left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix} \right] = -2 \quad \text{umax} \left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix} \right] = -2$$



ВАРИАНТ 2

$$z_{20,1} = -0.998 \quad z_{20,2} = -1.9 \quad z_{0,3} = -1 \quad z_{0,4} = -0.5$$

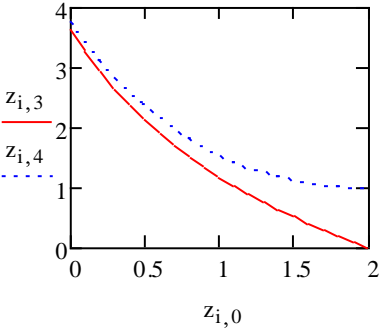
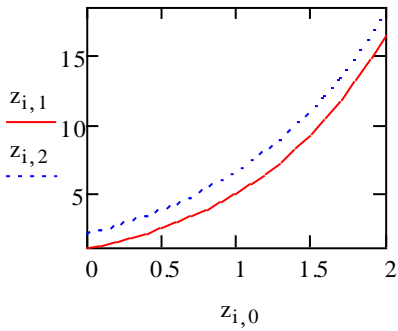
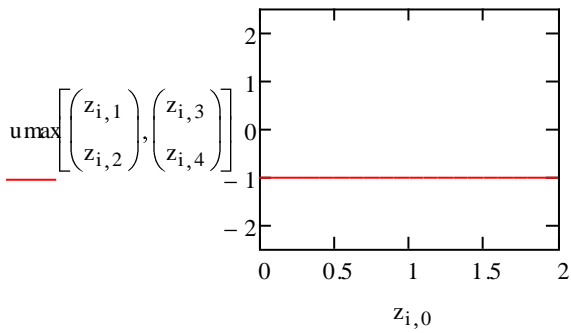
$$\text{umax} \left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix} \right] = -2 \quad \text{umax} \left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix} \right] = 2$$



ВАРИАНТ 3

$z_{20,1} = 16.54 \qquad z_{20,2} = 18.405 \qquad z_{0,3} = 3.627 \qquad z_{0,4} = 3.762$

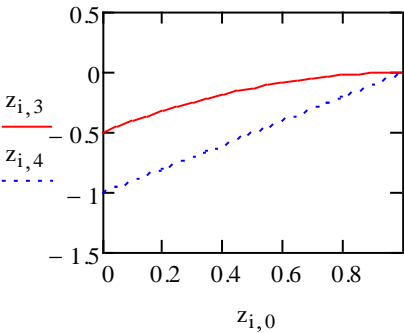
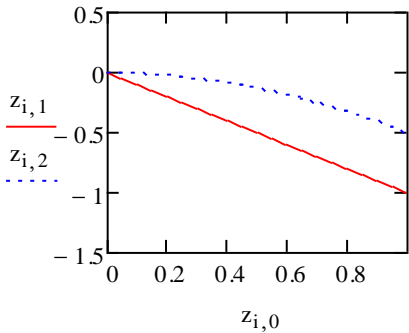
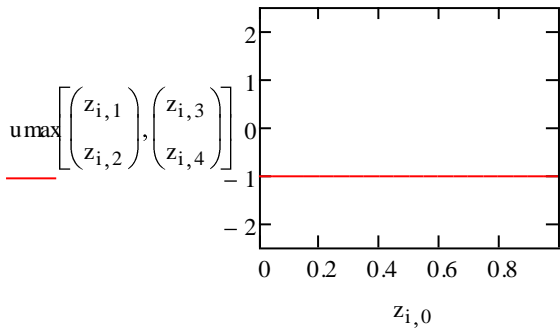
$$\operatorname{umax}\left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix}\right] = -1 \qquad \operatorname{umax}\left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix}\right] = -1$$



ВАРИАНТ 4

$z_{20,1} = -1 \qquad z_{20,2} = -0.5 \qquad z_{0,3} = -0.5 \qquad z_{0,4} = -1$

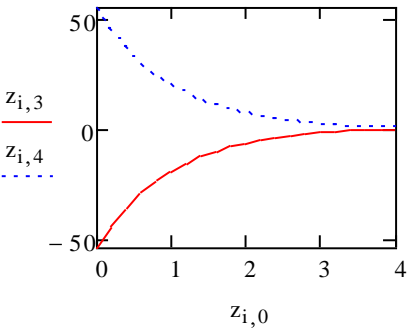
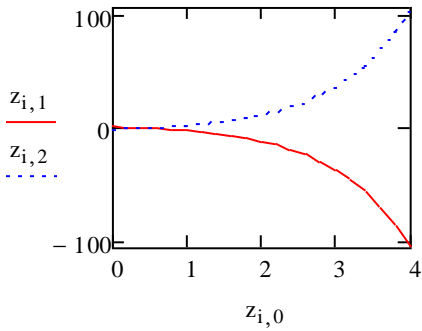
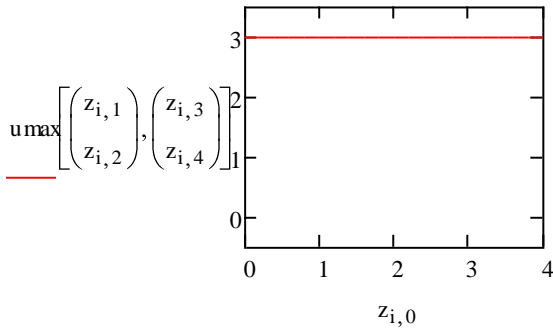
$$\operatorname{umax}\left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix}\right] = -1 \qquad \operatorname{umax}\left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix}\right] = -1$$



ВАРИАНТ 5

$z_{20,1} = -106.091 \quad z_{20,2} = 106.091 \quad z_{0,3} = -53.598 \quad z_{0,4} = 54.598$

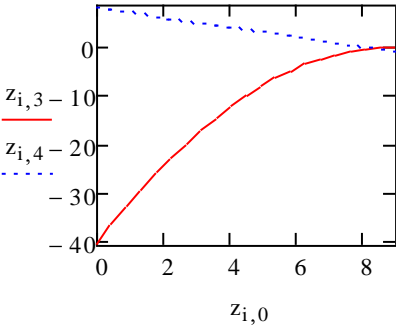
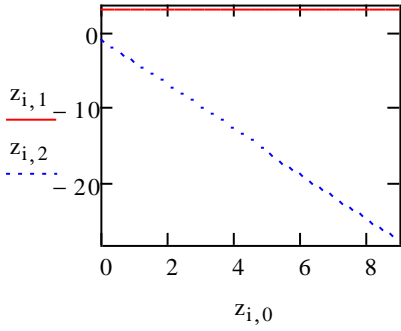
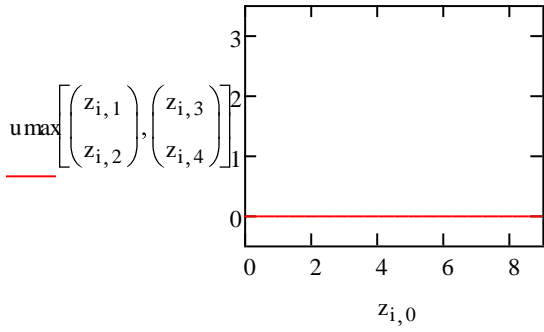
$$\text{umax} \left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix} \right] = 3 \qquad \text{umax} \left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix} \right] = 3$$



ВАРИАНТ 6

$z_{20,1} = 3 \quad z_{20,2} = -28 \quad z_{0,3} = -40.5 \quad z_{0,4} = 8$

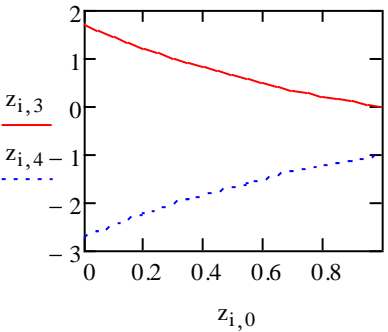
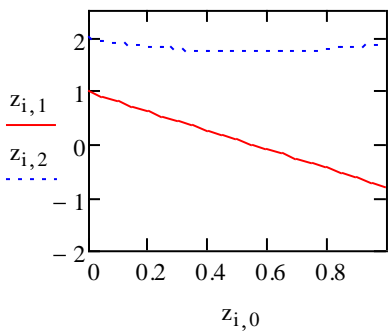
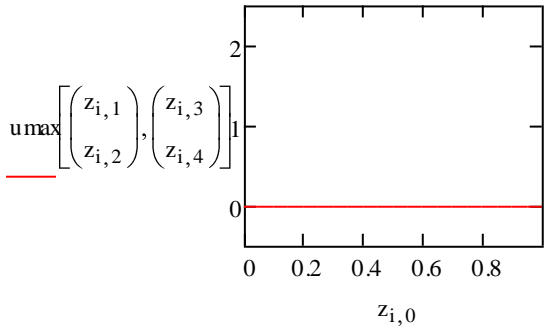
$$\text{umax} \left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix} \right] = 0 \qquad \text{umax} \left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix} \right] = 0$$



ВАРИАНТ 7

$z_{20,1} = -0.807 \quad z_{20,2} = 1.911 \quad z_{0,3} = 1.718 \quad z_{0,4} = -2.718$

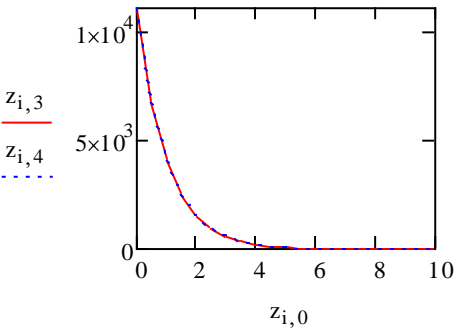
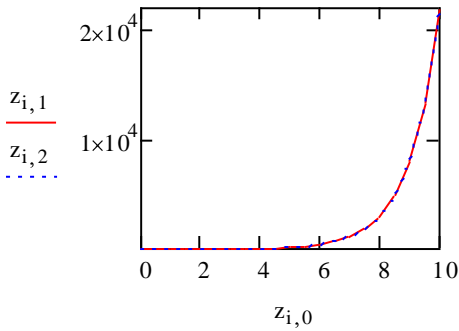
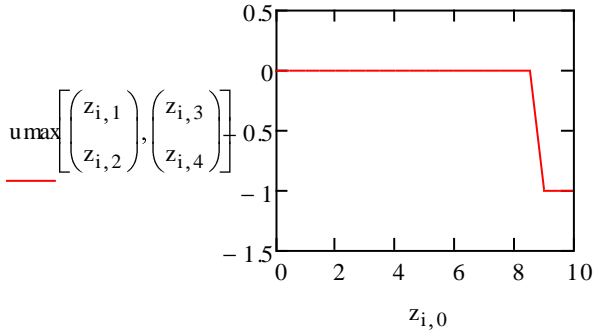
$$\text{umax} \left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix} \right] = 0 \quad \text{umax} \left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix} \right] = 0$$



ВАРИАНТ 8

$z_{20,1} = 2.195 \times 10^4 \quad z_{20,2} = 2.195 \times 10^4 \quad z_{0,3} = 1.101 \times 10^4 \quad z_{0,4} = 1.101 \times 10^4$

$$\text{umax} \left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix} \right] = 0 \quad \text{umax} \left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix} \right] = -1$$



ВАРИАНТ 9

$z_{20,1} = -6.739 \times 10^{-3}$

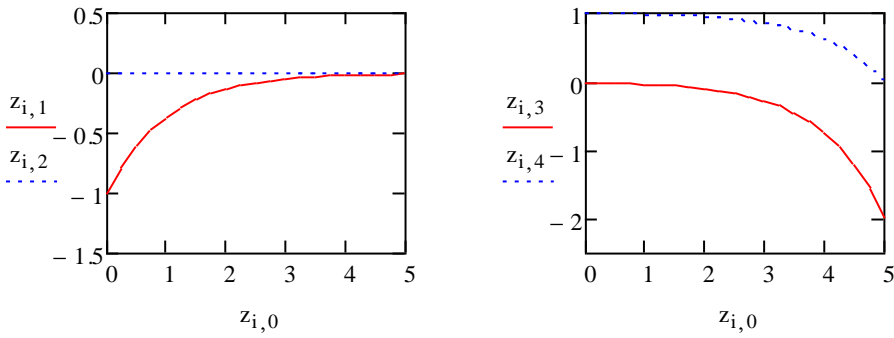
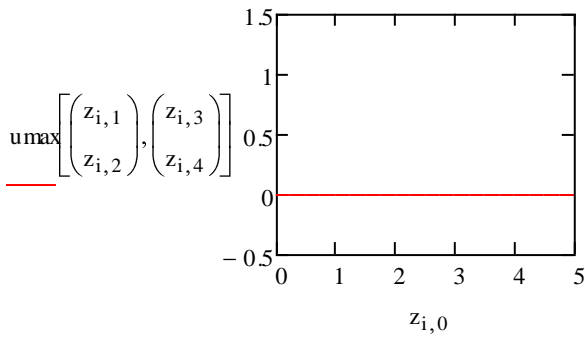
$z_{20,2} = 0$

$z_{0,3} = -0.013$

$z_{0,4} = 0.993$

$$\text{umax} \left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix} \right] = 0$$

$$\text{umax} \left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix} \right] = 0$$



ВАРИАНТ 10

$z_{20,1} = 1.094 \times 10^3$

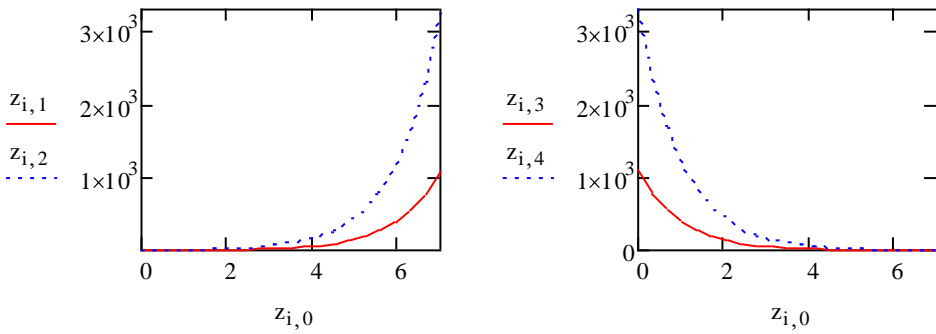
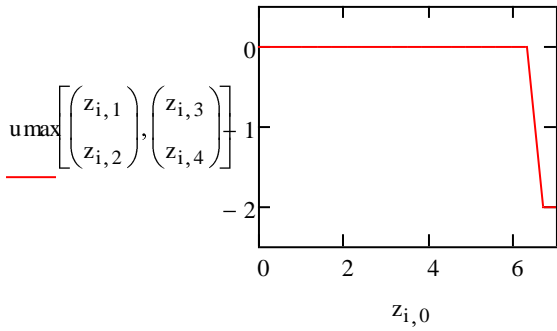
$z_{20,2} = 3.288 \times 10^3$

$z_{0,3} = 1.096 \times 10^3$

$z_{0,4} = 3.289 \times 10^3$

$$\text{umax} \left[\begin{pmatrix} z_{0,1} \\ z_{0,2} \end{pmatrix}, \begin{pmatrix} z_{0,3} \\ z_{0,4} \end{pmatrix} \right] = 0$$

$$\text{umax} \left[\begin{pmatrix} z_{20,1} \\ z_{20,2} \end{pmatrix}, \begin{pmatrix} z_{20,3} \\ z_{20,4} \end{pmatrix} \right] = -2$$



ЛАБОРАТОРНАЯ РАБОТА №5

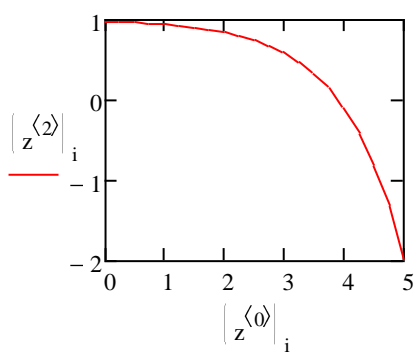
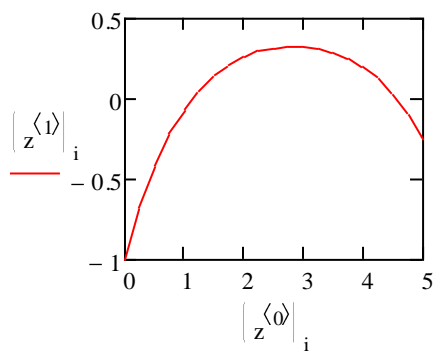
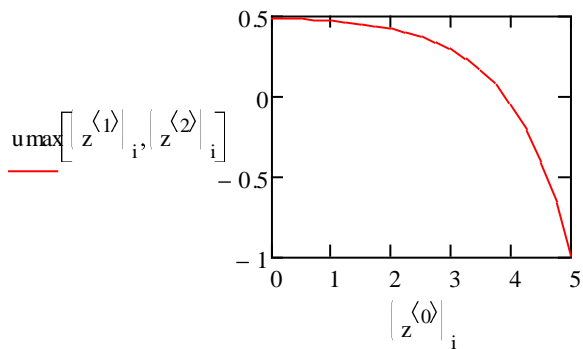
ВАРИАНТ 1

$$\left| z^{\langle 2 \rangle} \right|_0 = 0.98$$

$$\left| z^{\langle 1 \rangle} \right|_{20} = -0.26$$

$$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] = 0.49$$

$$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_{20}, \left| z^{\langle 2 \rangle} \right|_{20} \right] = -1$$



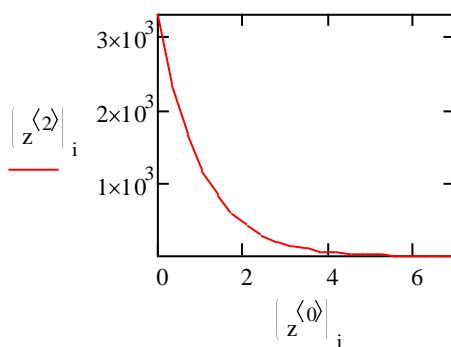
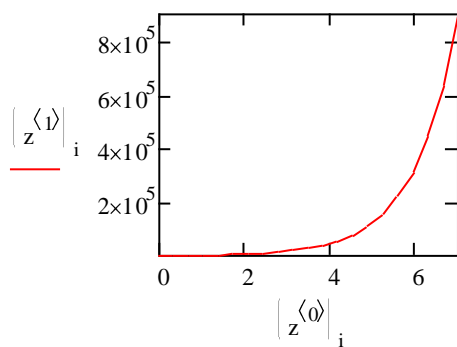
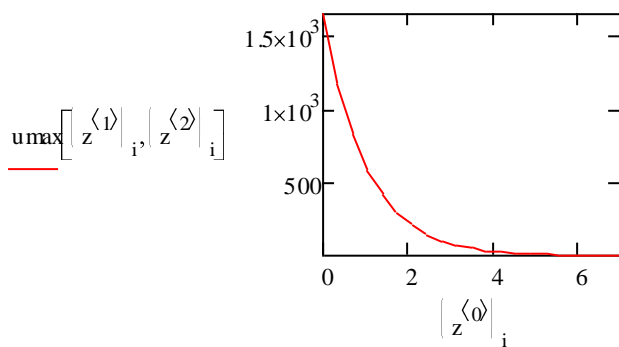
ВАРИАНТ 2

$$\left| z^{\langle 2 \rangle} \right|_0 = 3.289 \times 10^3$$

$$\left| z^{\langle 1 \rangle} \right|_{20} = 9.019 \times 10^5$$

$$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] = 1.644 \times 10^3$$

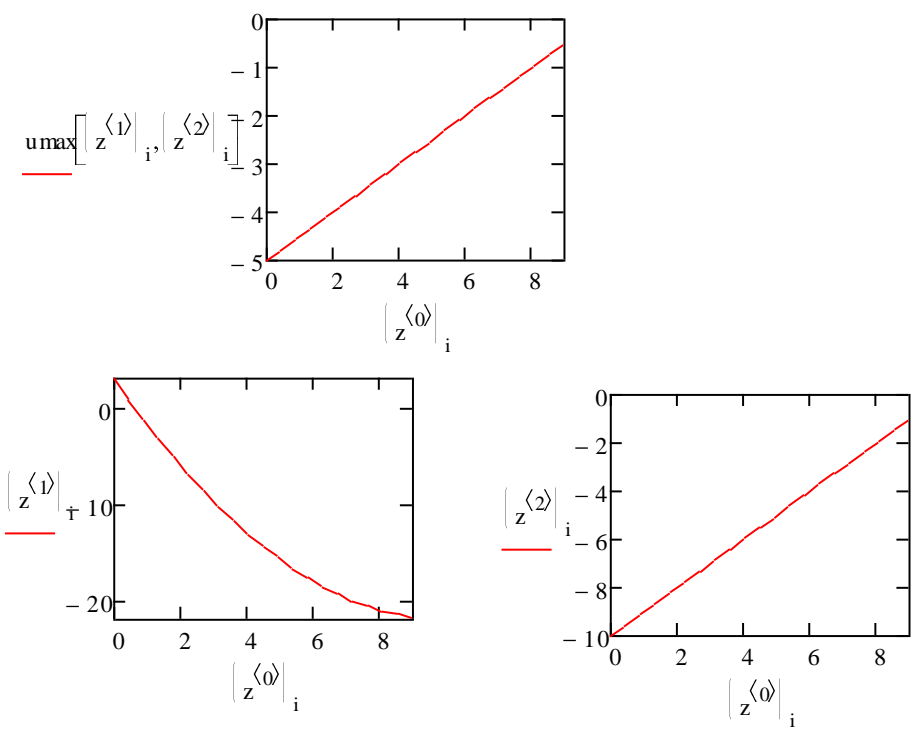
$$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_{20}, \left| z^{\langle 2 \rangle} \right|_{20} \right] = 1.002$$



ВАРИАНТ 3

$$\left|z^{\langle 2 \rangle}\right|_0=-10$$
$$\left|z^{\langle 1 \rangle}\right|_{20}=-21.75$$

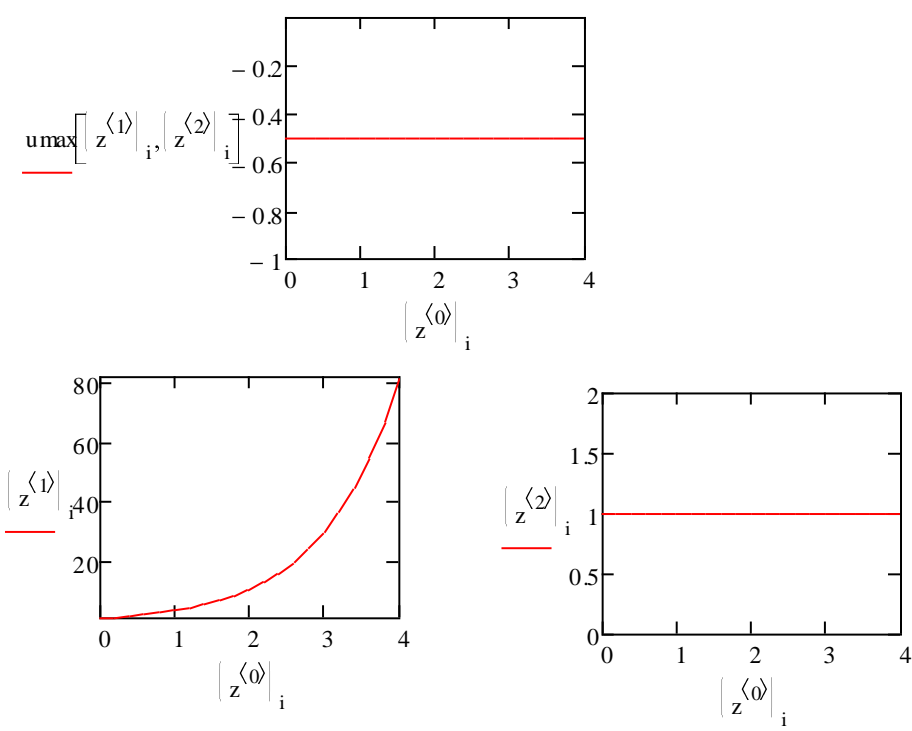
$$\operatorname{umax}\left[\left|z^{\langle 1 \rangle}\right|_0,\left|z^{\langle 2 \rangle}\right|_0\right]=-5$$
$$\operatorname{umax}\left[\left|z^{\langle 1 \rangle}\right|_{20},\left|z^{\langle 2 \rangle}\right|_{20}\right]=-0.5$$



ВАРИАНТ 4

$$\left|z^{\langle 2 \rangle}\right|_0=1$$
$$\left|z^{\langle 1 \rangle}\right|_{20}=81.394$$

$$\operatorname{umax}\left[\left|z^{\langle 1 \rangle}\right|_0,\left|z^{\langle 2 \rangle}\right|_0\right]=-0.5$$
$$\operatorname{umax}\left[\left|z^{\langle 1 \rangle}\right|_{20},\left|z^{\langle 2 \rangle}\right|_{20}\right]=-0.5$$



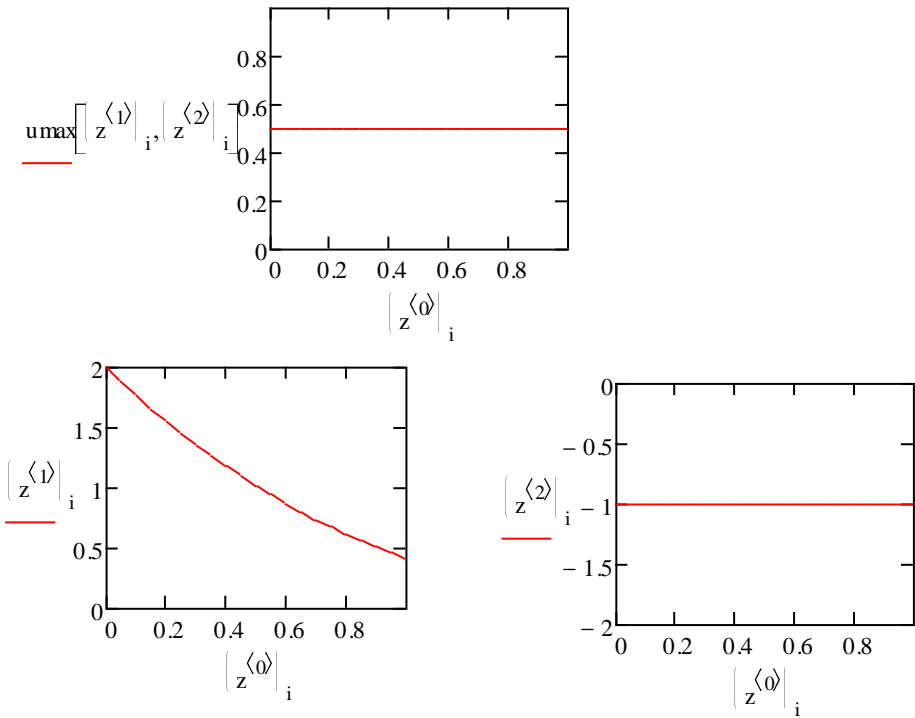
ВАРИАНТ 5

$\left| z^{\langle 2 \rangle} \right|_0 = -1$

$\left| z^{\langle 1 \rangle} \right|_{20} = 0.42$

$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] = 0.5$

$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_{20}, \left| z^{\langle 2 \rangle} \right|_{20} \right] = 0.5$



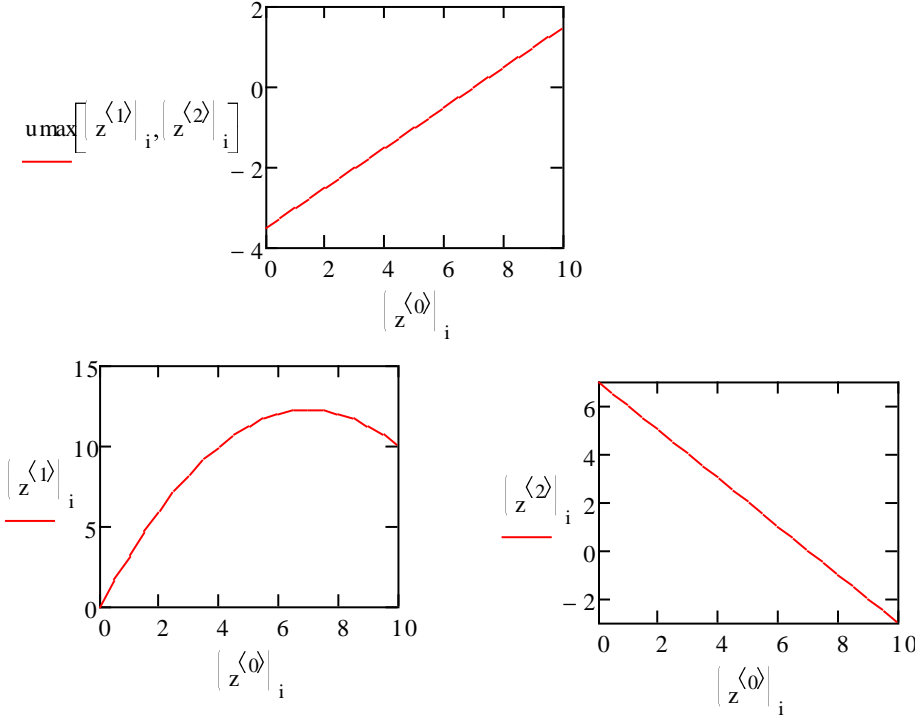
ВАРИАНТ 6

$\left| z^{\langle 2 \rangle} \right|_0 = 7$

$\left| z^{\langle 1 \rangle} \right|_{20} = 10$

$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] = -3.5$

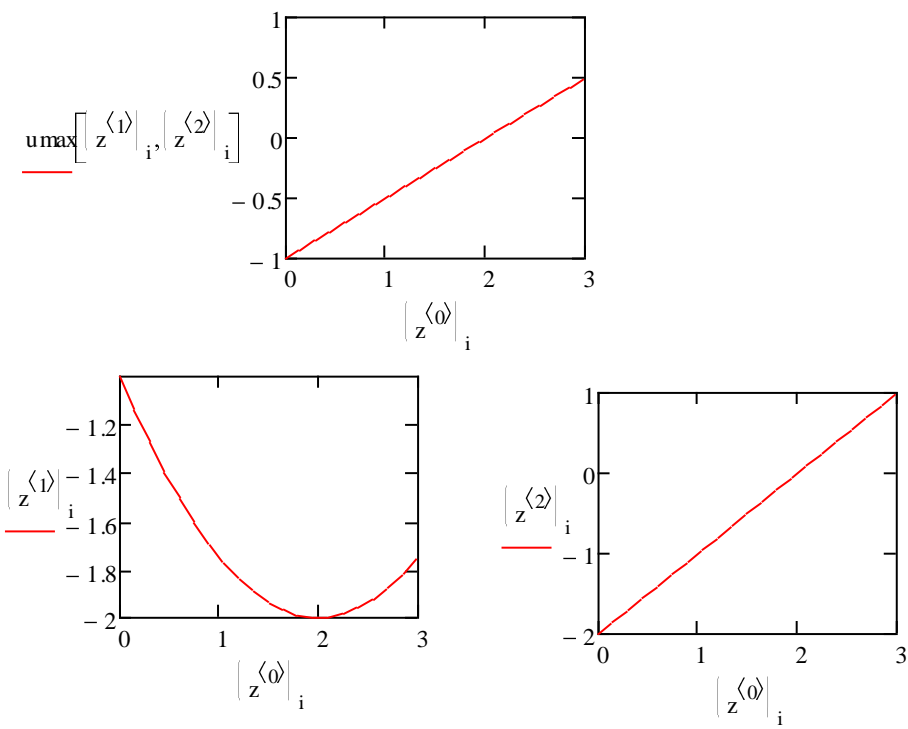
$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_{20}, \left| z^{\langle 2 \rangle} \right|_{20} \right] = 1.5$



ВАРИАНТ 7

$$\left| z^{\langle 2 \rangle} \right|_0 = -2$$
$$\left| z^{\langle 1 \rangle} \right|_{20} = -1.75$$

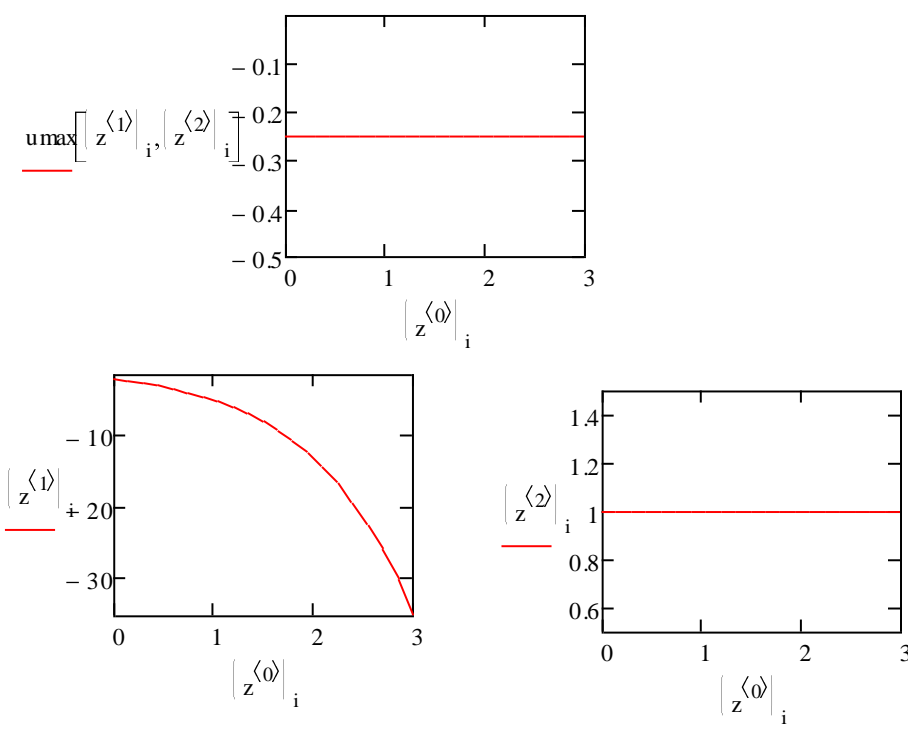
$$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] = -1$$
$$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_{20}, \left| z^{\langle 2 \rangle} \right|_{20} \right] = 0.5$$



ВАРИАНТ 8

$$\left| z^{\langle 2 \rangle} \right|_0 = 1$$
$$\left| z^{\langle 1 \rangle} \right|_{20} = -35.399$$

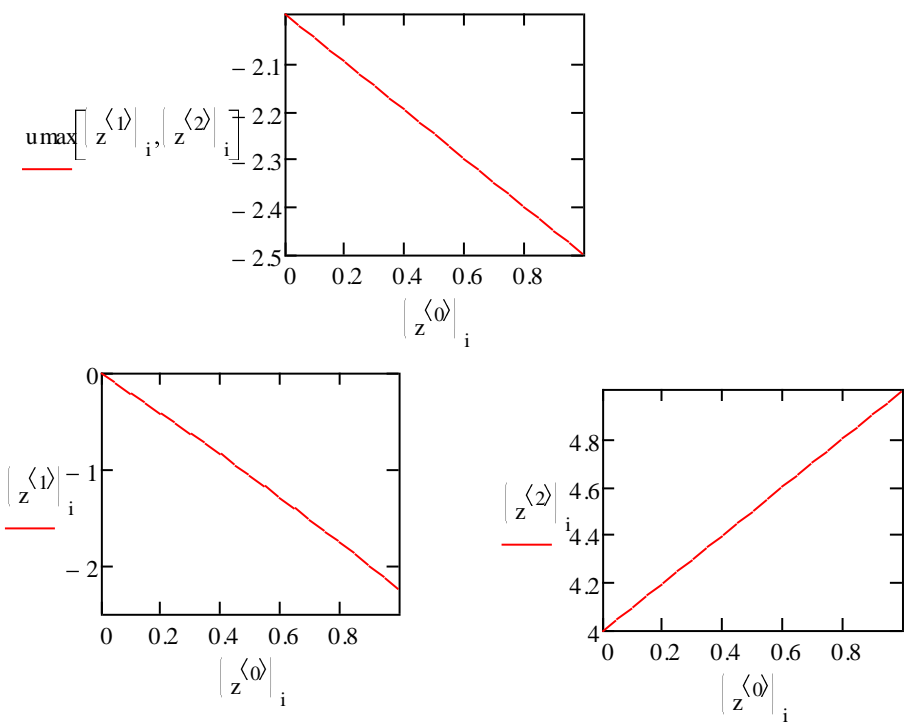
$$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] = -0.25$$
$$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_{20}, \left| z^{\langle 2 \rangle} \right|_{20} \right] = -0.25$$



ВАРИАНТ 9

$$\left|z^{\langle 2 \rangle}\right|_0=4$$
$$\left|z^{\langle 1 \rangle}\right|_{20}=-2.25$$

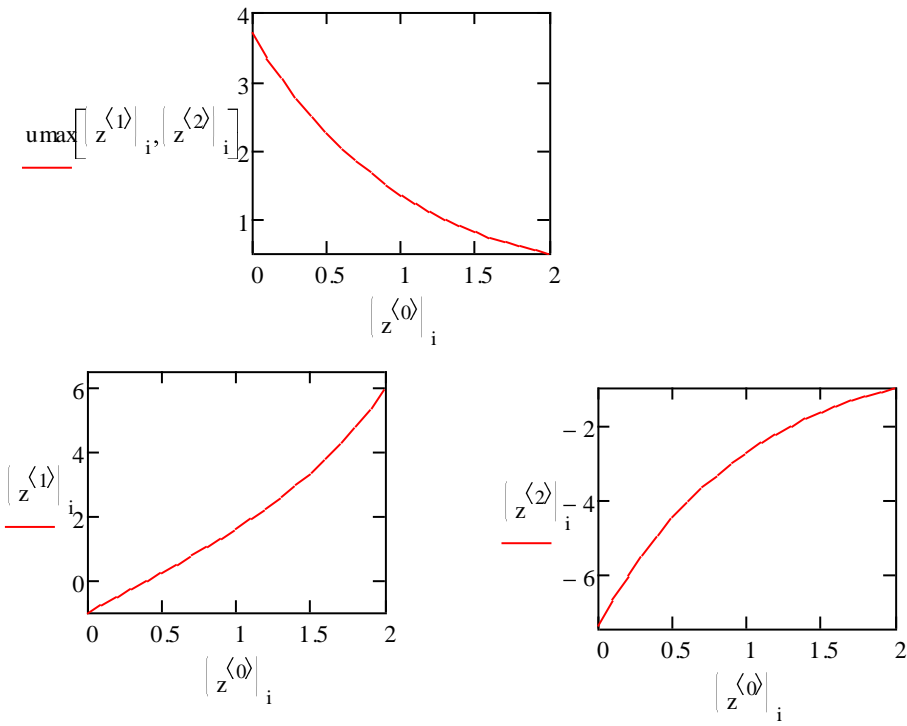
$$\operatorname{umax}\left[\left|z^{\langle 1 \rangle}\right|_0,\left|z^{\langle 2 \rangle}\right|_0\right]=-2$$
$$\operatorname{umax}\left[\left|z^{\langle 1 \rangle}\right|_{20},\left|z^{\langle 2 \rangle}\right|_{20}\right]=-2.5$$



ВАРИАНТ 10

$$\left|z^{\langle 2 \rangle}\right|_0=-7.389$$
$$\left|z^{\langle 1 \rangle}\right|_{20}=6.01$$

$$\operatorname{umax}\left[\left|z^{\langle 1 \rangle}\right|_0,\left|z^{\langle 2 \rangle}\right|_0\right]=3.695$$
$$\operatorname{umax}\left[\left|z^{\langle 1 \rangle}\right|_{20},\left|z^{\langle 2 \rangle}\right|_{20}\right]=0.5$$



ЛАБОРАТОРНАЯ РАБОТА №6

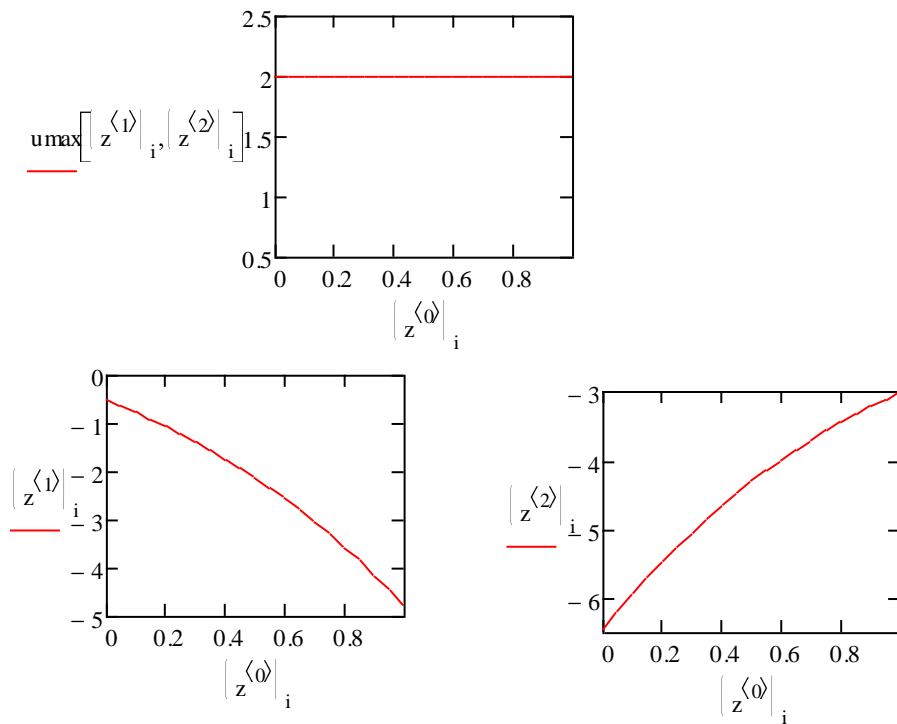
ВАРИАНТ 1

$$\left| z^{\langle 2 \rangle} \right|_0 = -6.437$$

$$\left| z^{\langle 1 \rangle} \right|_{20} = -4.796$$

$$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] = 2$$

$$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_{20}, \left| z^{\langle 2 \rangle} \right|_{20} \right] = 2$$



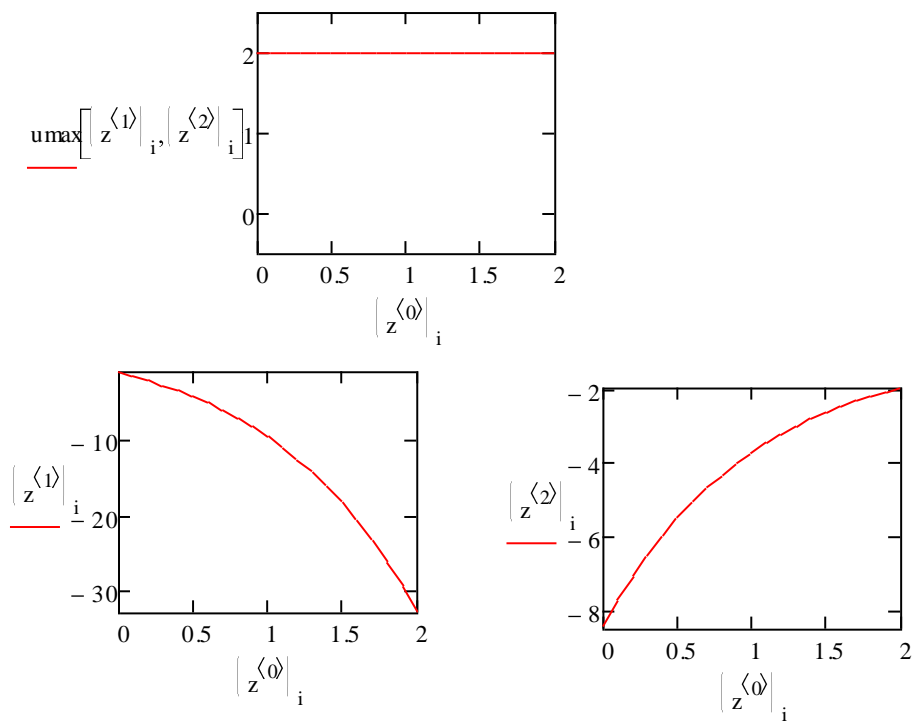
ВАРИАНТ 2

$$\left| z^{\langle 2 \rangle} \right|_0 = -8.389$$

$$\left| z^{\langle 1 \rangle} \right|_{20} = -32.945$$

$$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] = 2$$

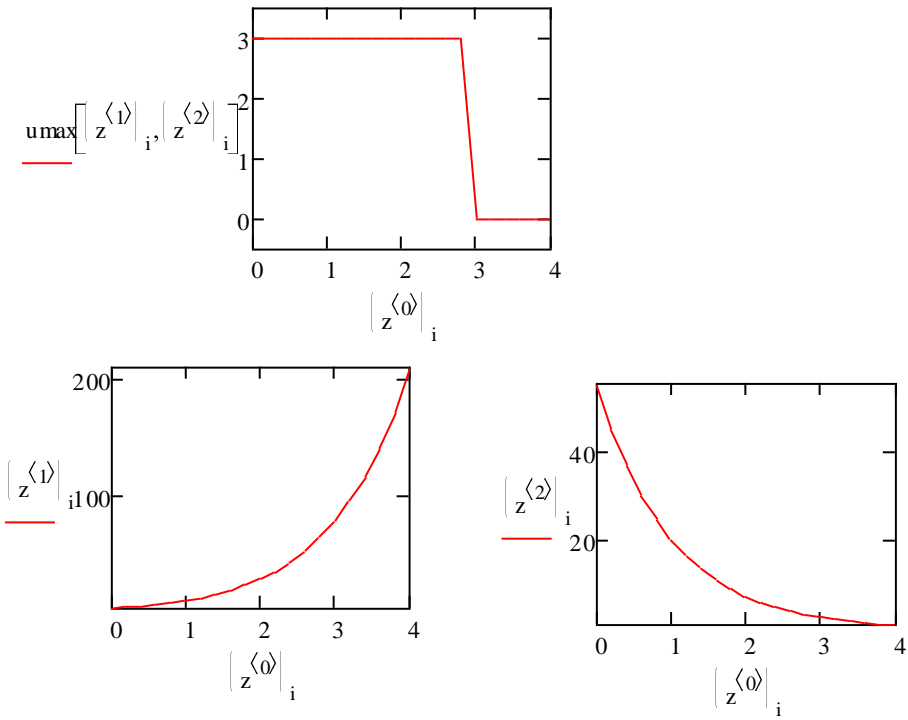
$$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_{20}, \left| z^{\langle 2 \rangle} \right|_{20} \right] = 2$$



ВАРИАНТ 3

$$\begin{aligned} \left|z^{\langle 2 \rangle}\right|_0 &= 54.598 \\ \left|z^{\langle 1 \rangle}\right|_{20} &= 209.353 \end{aligned}$$

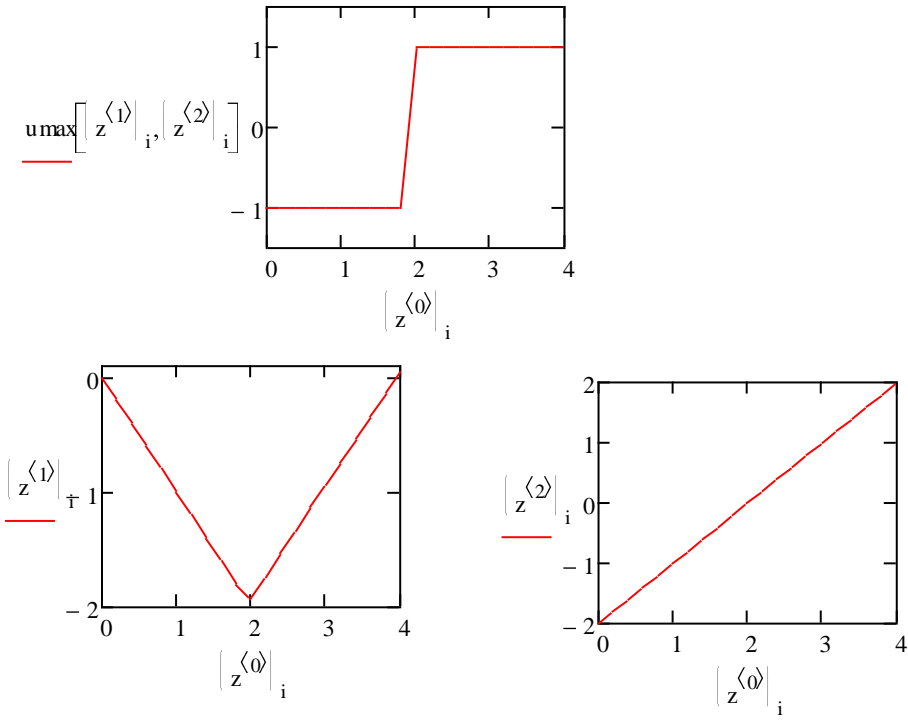
$$\begin{aligned} \operatorname{umax}\left[\left|z^{\langle 1 \rangle}\right|_0,\left|z^{\langle 2 \rangle}\right|_0\right] &= 3 \\ \operatorname{umax}\left[\left|z^{\langle 1 \rangle}\right|_{20},\left|z^{\langle 2 \rangle}\right|_{20}\right] &= 0 \end{aligned}$$



ВАРИАНТ 4

$$\begin{aligned} \left|z^{\langle 2 \rangle}\right|_0 &= -2 \\ \left|z^{\langle 1 \rangle}\right|_{20} &= 0.067 \end{aligned}$$

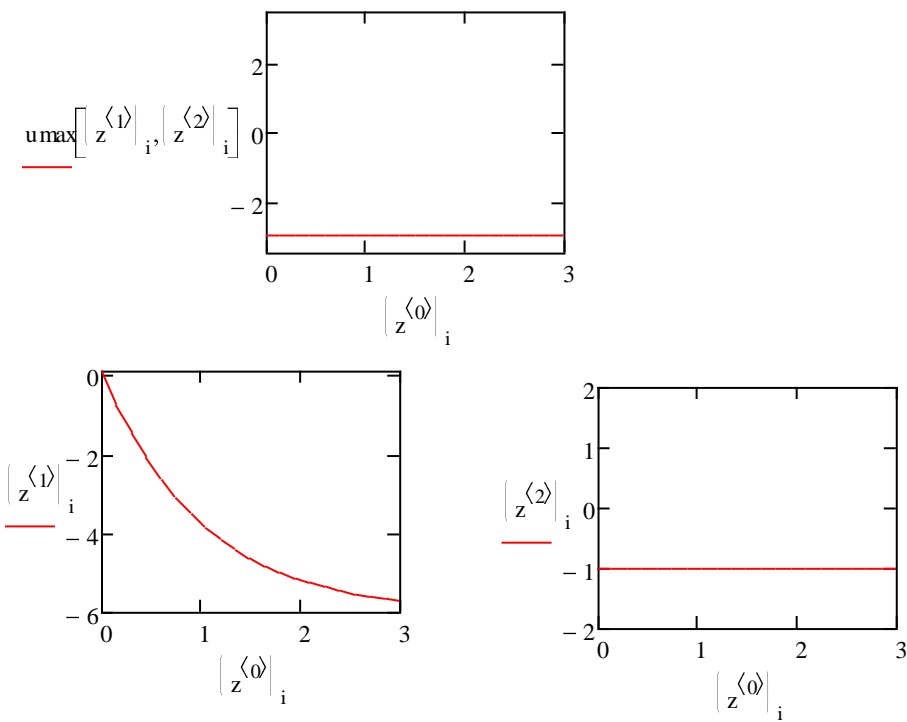
$$\begin{aligned} \operatorname{umax}\left[\left|z^{\langle 1 \rangle}\right|_0,\left|z^{\langle 2 \rangle}\right|_0\right] &= -1 \\ \operatorname{umax}\left[\left|z^{\langle 1 \rangle}\right|_{20},\left|z^{\langle 2 \rangle}\right|_{20}\right] &= 1 \end{aligned}$$



ВАРИАНТ 5

$$\left| z^{\langle 2 \rangle} \right|_0 = -1$$
$$\left| z^{\langle 1 \rangle} \right|_{20} = -5.696$$

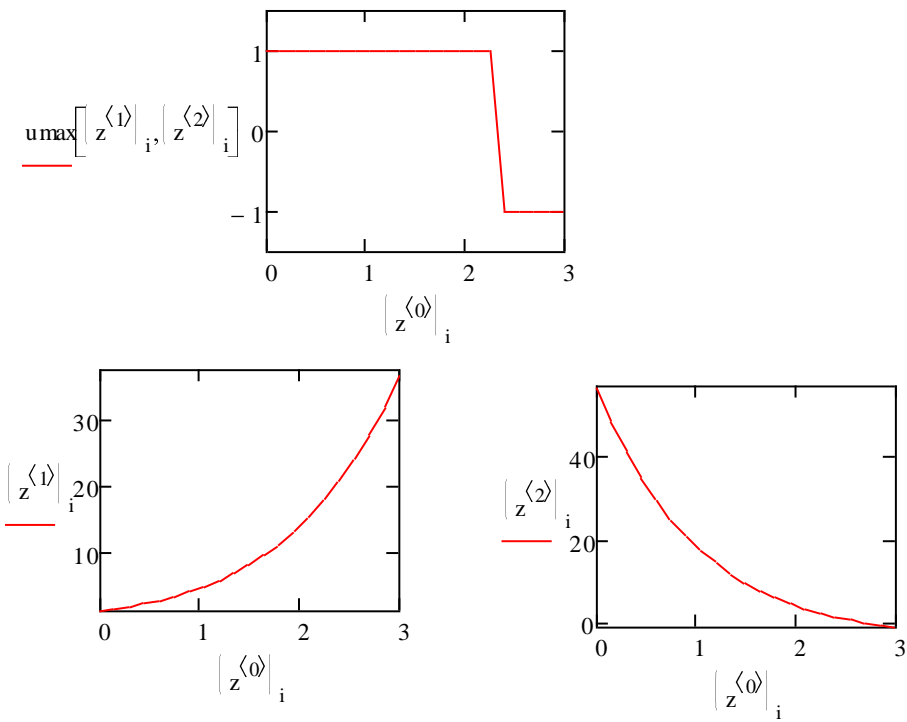
$$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] = -3$$
$$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_{20}, \left| z^{\langle 2 \rangle} \right|_{20} \right] = -3$$



ВАРИАНТ 6

$$\left| z^{\langle 2 \rangle} \right|_0 = 56.257$$
$$\left| z^{\langle 1 \rangle} \right|_{20} = 37.043$$

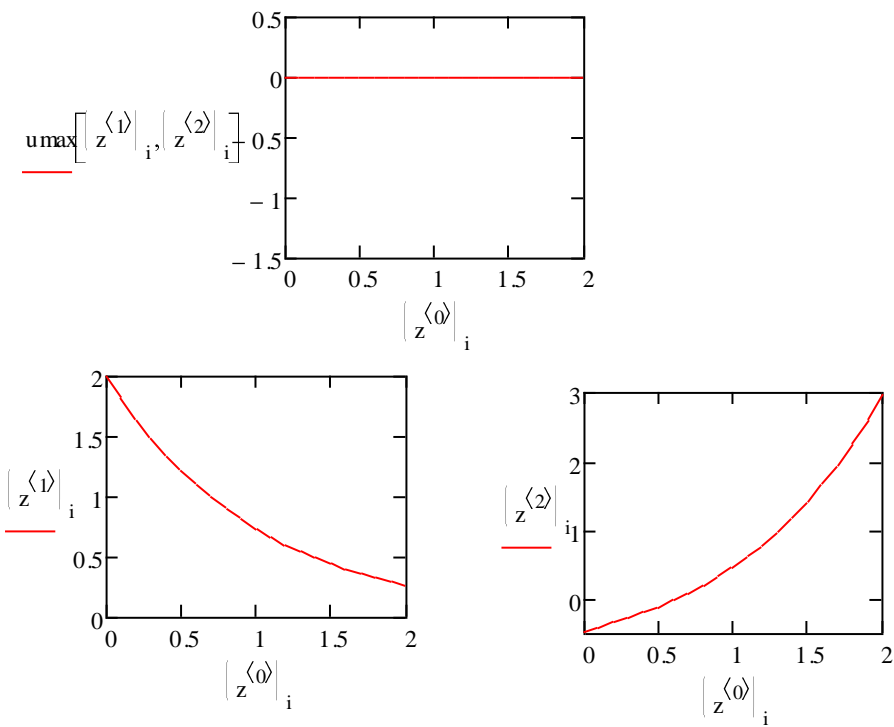
$$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] = 1$$
$$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_{20}, \left| z^{\langle 2 \rangle} \right|_{20} \right] = -1$$



ВАРИАНТ 7

$$\begin{aligned} \left| z^{\langle 2 \rangle} \right|_0 &= -0.459 \\ \left| z^{\langle 1 \rangle} \right|_{20} &= 0.271 \end{aligned}$$

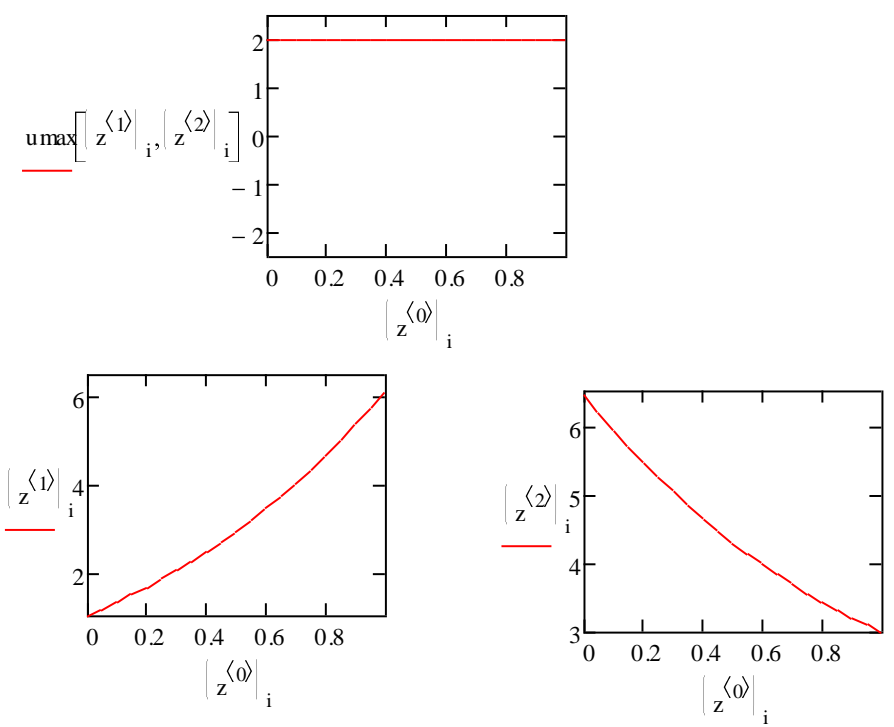
$$\begin{aligned} \operatorname{umax} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] &= 0 \\ \operatorname{umax} \left[\left| z^{\langle 1 \rangle} \right|_{20}, \left| z^{\langle 2 \rangle} \right|_{20} \right] &= 0 \end{aligned}$$



ВАРИАНТ 8

$$\begin{aligned} \left| z^{\langle 2 \rangle} \right|_0 &= 6.437 \\ \left| z^{\langle 1 \rangle} \right|_{20} &= 6.155 \end{aligned}$$

$$\begin{aligned} \operatorname{umax} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] &= 2 \\ \operatorname{umax} \left[\left| z^{\langle 1 \rangle} \right|_{20}, \left| z^{\langle 2 \rangle} \right|_{20} \right] &= 2 \end{aligned}$$



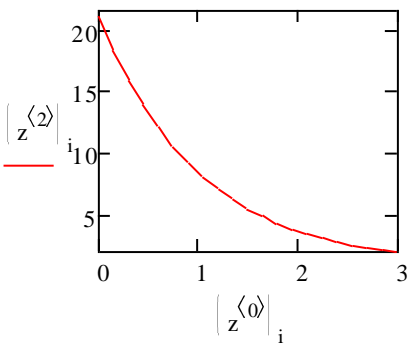
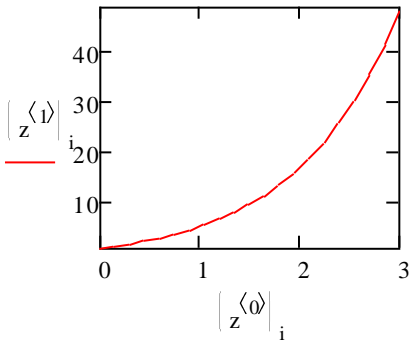
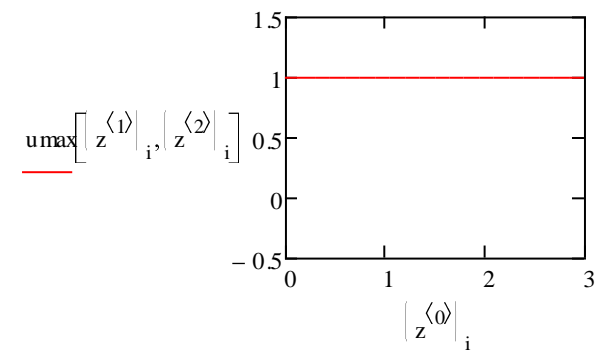
ВАРИАНТ 9

$\left| z^{\langle 2 \rangle} \right|_0 = 21.086$

$\left| z^{\langle 1 \rangle} \right|_{20} = 48.213$

$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] = 1$

$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_{20}, \left| z^{\langle 2 \rangle} \right|_{20} \right] = 1$



ВАРИАНТ 10

$\left| z^{\langle 2 \rangle} \right|_0 = -0.896$

$\left| z^{\langle 1 \rangle} \right|_{20} = 0.632$

$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_0, \left| z^{\langle 2 \rangle} \right|_0 \right] = -1$

$\text{umax} \left[\left| z^{\langle 1 \rangle} \right|_{20}, \left| z^{\langle 2 \rangle} \right|_{20} \right] = -1$

