

- 74 -

$$\begin{cases} 2x + 3y + 5z = 10 \\ 3x + 7y + 4z = 3 \\ x + 2y + 2z = 3 \end{cases} \quad \begin{cases} x = \\ y = \\ z = \end{cases}$$

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$$\begin{cases} 2x + 3y + 5z = 10 \\ 3x + 7y + 4z = 3 \\ x + 2y + 2z = 3 \end{cases} ; \begin{pmatrix} 2 & 3 & 5 \\ 3 & 7 & 4 \\ 1 & 2 & 2 \end{pmatrix} \begin{pmatrix} x \\ y \\ z \end{pmatrix} = \begin{pmatrix} 10 \\ 3 \\ 3 \end{pmatrix} ; \begin{pmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{pmatrix} \begin{pmatrix} x_1 \\ x_2 \\ x_3 \end{pmatrix} = \begin{pmatrix} b_1 \\ b_2 \\ b_3 \end{pmatrix}$$

$$\Delta = \det \begin{pmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{pmatrix} = \det \begin{pmatrix} 2 & 3 & 5 \\ 3 & 7 & 4 \\ 1 & 2 & 2 \end{pmatrix} = 2 \cdot 7 \cdot 2 + 3 \cdot 4 \cdot 1 + 5 \cdot 3 \cdot 2 - 5 \cdot 7 \cdot 1 - 3 \cdot 3 \cdot 2 - 2 \cdot 4 \cdot 2 = 28 + 12 + 30 - 35 - 18 - 16 = 70 - 63 = 7$$

$$\Delta_1 = \det \begin{pmatrix} b_1 & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ b_3 & a_{32} & a_{33} \end{pmatrix} = \det \begin{pmatrix} 10 & 3 & 5 \\ 3 & 7 & 4 \\ 3 & 2 & 2 \end{pmatrix} = 10 \cdot 7 \cdot 2 + 3 \cdot 4 \cdot 3 + 5 \cdot 3 \cdot 2 - 5 \cdot 7 \cdot 3 - 3 \cdot 3 \cdot 2 - 10 \cdot 4 \cdot 2 = 140 + 36 + 30 - 105 - 18 - 80 = 206 - 203 = 3$$

$$\Delta_2 = \det \begin{pmatrix} a_{11} & b_1 & a_{13} \\ a_{21} & b_2 & a_{23} \\ a_{31} & b_3 & a_{33} \end{pmatrix} = \det \begin{pmatrix} 2 & 10 & 5 \\ 3 & 3 & 4 \\ 1 & 3 & 2 \end{pmatrix} = 2 \cdot 3 \cdot 2 + 10 \cdot 4 \cdot 1 + 5 \cdot 3 \cdot 3 - 5 \cdot 3 \cdot 1 - 10 \cdot 3 \cdot 2 - 2 \cdot 4 \cdot 3 = 12 + 40 + 45 - 15 - 60 - 24 = 97 - 95 = 2$$

$$\Delta_3 = \det \begin{pmatrix} a_{11} & a_{12} & b_1 \\ a_{21} & a_{22} & b_2 \\ a_{31} & a_{32} & b_3 \end{pmatrix} = \det \begin{pmatrix} 2 & 3 & 10 \\ 3 & 7 & 3 \\ 1 & 2 & 3 \end{pmatrix} = 2 \cdot 7 \cdot 3 + 3 \cdot 3 \cdot 1 + 10 \cdot 3 \cdot 2 - 10 \cdot 7 \cdot 1 - 3 \cdot 3 \cdot 3 - 2 \cdot 3 \cdot 2 = 42 + 9 + 60 - 70 - 27 - 12 = 111 - 109 = 2$$

$$\begin{cases} x = x_1 = \frac{\Delta_1}{\Delta} = \frac{3}{7} = 3 \\ y = x_2 = \frac{\Delta_2}{\Delta} = \frac{-2}{1} = -2 \\ z = x_3 = \frac{\Delta_3}{\Delta} = \frac{2}{1} = 2 \end{cases} \quad \begin{cases} 2x + 3y + 5z = 2 \cdot 3 + 3(-2) + 5 \cdot 2 = 6 - 6 + 10 = 10 \\ 3x + 7y + 4z = 3 \cdot 3 + 7(-2) + 4 \cdot 2 = 9 - 14 + 8 = 3 \\ x + 2y + 2z = 3 + 2(-2) + 2 \cdot 2 = 3 - 4 + 4 = 3 \end{cases}$$

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$$x = 3 \wedge y = -2 \wedge z = 2$$

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-74-

$$\begin{cases} 2x + 3y + 5z = 10 \\ 3x + 7y + 4z = 3 \\ x + 2y + 2z = 3 \end{cases} \quad \begin{cases} x = \\ y = \\ z = \end{cases}$$

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$$\begin{cases} 2x + 3y + 5z = 10 \\ 3x + 7y + 4z = 3 \\ x + 2y + 2z = 3 \end{cases} \Leftrightarrow \left(\begin{array}{ccc|c} 2 & 3 & 5 & 10 \\ 3 & 7 & 4 & 3 \\ 1 & 2 & 2 & 3 \end{array} \right) \Leftrightarrow$$

$$(1.) = (1.) - 2(3.); \quad (2.) = (2.) - 3(3.)$$

$$\Leftrightarrow \left(\begin{array}{ccc|c} 2-2\cdot1 & 3-2\cdot2 & 5-2\cdot2 & 10-2\cdot3 \\ 3-3\cdot1 & 7-3\cdot2 & 4-3\cdot2 & 3-3\cdot3 \\ 1 & 2 & 2 & 3 \end{array} \right) = \left(\begin{array}{ccc|c} 0 & -1 & 1 & 4 \\ 0 & 1 & -2 & -6 \\ 1 & 2 & 2 & 3 \end{array} \right) \Leftrightarrow$$

$$(1.) = (1.) + (2.)$$

$$\Leftrightarrow \left(\begin{array}{ccc|c} 0+0 & -1+1 & 1-2 & 4-6 \\ 0 & 1 & -2 & -6 \\ 1 & 2 & 2 & 3 \end{array} \right) = \left(\begin{array}{ccc|c} 0 & 0 & -1 & -2 \\ 0 & 1 & -2 & -6 \\ 1 & 2 & 2 & 3 \end{array} \right) \Leftrightarrow$$

$$(1.) = (-1)(1.)$$

$$\Leftrightarrow \left(\begin{array}{ccc|c} (-1)0 & (-1)0 & (-1)(-1) & (-1)(-2) \\ 0 & 1 & -2 & -6 \\ 1 & 2 & 2 & 3 \end{array} \right) = \left(\begin{array}{ccc|c} 0 & 0 & 1 & 2 \\ 0 & 1 & -2 & -6 \\ 1 & 2 & 2 & 3 \end{array} \right) \Leftrightarrow \begin{cases} z = 2 \\ y - 2z = -6 \\ x + 2y + 2z = 3 \end{cases}$$

$$\begin{cases} z = 2 \\ y = 2z - 6 = 2\cdot2 - 6 = 4 - 6 = -2 \\ x = -2y - 2z + 3 = -2(-2) - 2\cdot2 + 3 = 4 - 4 + 3 = 3 \end{cases} \quad \text{i} \quad \begin{cases} 2x + 3y + 5z = 2\cdot3 + 3(-2) + 5\cdot2 = 6 - 6 + 10 = 10 \\ 3x + 7y + 4z = 3\cdot3 + 7(-2) + 4\cdot2 = 9 - 14 + 8 = 3 \\ x + 2y + 2z = 3 + 2(-2) + 2\cdot2 = 3 - 4 + 4 = 3 \end{cases}$$

$$\triangleleft x = 3 \wedge y = -2 \wedge z = 2$$

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-75-

$$\begin{cases} 5x - 6y + 4z = 3 \\ 3x - 3y + 2z = 2 \\ 4x - 5y + 2z = 1 \end{cases} \begin{cases} x = \\ y = \\ z = \end{cases}$$

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$$\begin{cases} 5x - 6y + 4z = 3 \\ 3x - 3y + 2z = 2 \\ 4x - 5y + 2z = 1 \end{cases} \begin{pmatrix} 5 & -6 & 4 \\ 3 & -3 & 2 \\ 4 & -5 & 2 \end{pmatrix} \begin{pmatrix} x \\ y \\ z \end{pmatrix} = \begin{pmatrix} 3 \\ 2 \\ 1 \end{pmatrix} ; \begin{pmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{pmatrix} \begin{pmatrix} x \\ y \\ z \end{pmatrix} = \begin{pmatrix} b_1 \\ b_2 \\ b_3 \end{pmatrix}$$

$$\Delta = \det \begin{pmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{pmatrix} = \det \begin{pmatrix} 5 & -6 & 4 \\ 3 & -3 & 2 \\ 4 & -5 & 2 \end{pmatrix} = 5(-3)2 + (-6)2 \cdot 4 + 4 \cdot 3(-5) -$$
$$- 4(-3)4 - (-6)3 \cdot 2 - 5 \cdot 2(-5) =$$
$$= -30 - 48 - 60 + 48 + 36 + 50 = 86 - 90 = -4$$

$$\Delta_1 = \det \begin{pmatrix} b_1 & a_{12} & a_{13} \\ b_2 & a_{22} & a_{23} \\ b_3 & a_{32} & a_{33} \end{pmatrix} = \det \begin{pmatrix} 3 & -6 & 4 \\ 2 & -3 & 2 \\ 1 & -5 & 2 \end{pmatrix} =$$
$$= 3(-3)2 + (-6)2 \cdot 1 + 4 \cdot 2 \cdot (-5) -$$
$$- 4(-3) \cdot 1 - (-6)2 \cdot 2 - 3 \cdot 2 \cdot (-5) =$$
$$= -18 - 12 - 40 + 12 + 24 + 30 = 54 - 58 = -4$$

$$\Delta_2 = \det \begin{pmatrix} a_{11} & b_1 & a_{13} \\ a_{21} & b_2 & a_{23} \\ a_{31} & b_3 & a_{33} \end{pmatrix} = \det \begin{pmatrix} 5 & 3 & 4 \\ 3 & 2 & 2 \\ 4 & 1 & 2 \end{pmatrix} =$$
$$= 5 \cdot 2 \cdot 2 + 3 \cdot 2 \cdot 4 + 4 \cdot 3 \cdot 1 -$$
$$- 4 \cdot 2 \cdot 4 - 3 \cdot 3 \cdot 2 - 5 \cdot 2 \cdot 1 =$$
$$= 20 + 24 + 12 - 32 - 18 - 10 = 56 - 60 = -4$$

$$\Delta_3 = \det \begin{pmatrix} a_{11} & a_{12} & b_1 \\ a_{21} & a_{22} & b_2 \\ a_{31} & a_{32} & b_3 \end{pmatrix} = \det \begin{pmatrix} 5 & -6 & 3 \\ 3 & -3 & 2 \\ 4 & -5 & 1 \end{pmatrix} = 5(-3) \cdot 1 + (-6) \cdot 2 \cdot 4 + 3 \cdot 3(-5) -$$
$$- 3(-3)4 - (-6)3 \cdot 1 - 5 \cdot 2 \cdot (-5) =$$
$$= -15 - 48 - 45 + 36 + 18 + 50 = 104 - 108 = -4$$

$$\begin{cases} x = x_1 = \frac{\Delta_1}{\Delta} = \frac{-4}{-4} = 1 \\ y = x_2 = \frac{\Delta_2}{\Delta} = \frac{-4}{-4} = 1 \\ z = x_3 = \frac{\Delta_3}{\Delta} = \frac{-4}{-4} = 1 \end{cases} \begin{cases} 5x - 6y + 4z = 5 - 6 + 4 = 3 \\ 3x - 3y + 2z = 3 - 3 + 2 = 2 \\ 4x - 5y + 2z = 4 - 5 + 2 = 1 \end{cases}$$

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$$x = y = z = 1$$

(3)

-75-

$$\begin{cases} 5x - 6y + 4z = 3 \\ 3x - 3y + 2z = 2 \\ 4x - 5y + 2z = 1 \end{cases} \begin{cases} x = \\ y = \\ z = \end{cases}$$

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$$\begin{cases} 5x - 6y + 4z = 3 \\ 3x - 3y + 2z = 2 \\ 4x - 5y + 2z = 1 \end{cases} \Leftrightarrow \left(\begin{array}{ccc|c} 5 & -6 & 4 & 3 \\ 3 & -3 & 2 & 2 \\ 4 & -5 & 2 & 1 \end{array} \right) \Leftrightarrow$$

$$(2.) = 2(2.) - 3(1.); (3.) = 5(3.) - 4(1.)$$

$$\Leftrightarrow \left(\begin{array}{ccc|c} 5 & -6 & 4 & 3 \\ 5 \cdot 3 - 3 \cdot 5 & 5(-3) - 3(-6) & 5 \cdot 2 - 3 \cdot 4 & 5 \cdot 2 - 3 \cdot 3 \\ 5 \cdot 4 - 4 \cdot 5 & 5(-5) - 4(-6) & 5 \cdot 2 - 4 \cdot 4 & 5 \cdot 1 - 4 \cdot 3 \end{array} \right) = \left(\begin{array}{ccc|c} 5 & -6 & 4 & 3 \\ 0 & 3 & -2 & 1 \\ 0 & -1 & -6 & -7 \end{array} \right) \Leftrightarrow$$

$$(3.) = 3(3.) + (2.)$$

$$\Leftrightarrow \left(\begin{array}{ccc|c} 5 & -6 & 4 & 3 \\ 0 & 3 & -2 & 1 \\ 3 \cdot 0 + 0 & 3(-1) + 3 & 3(-6) - 2 & 3(-7) + 1 \end{array} \right) = \left(\begin{array}{ccc|c} 5 & -6 & 4 & 3 \\ 0 & 3 & -2 & 1 \\ 0 & 0 & -20 & -20 \end{array} \right) \Leftrightarrow$$

$$(1.) = \frac{(1.)}{5}; (2.) = \frac{(2.)}{3}; (3.) = \frac{(3.)}{-20}$$

$$\Leftrightarrow \left(\begin{array}{ccc|c} \frac{5}{5} & \frac{-6}{5} & \frac{4}{5} & \frac{3}{5} \\ \frac{0}{3} & \frac{3}{3} & \frac{-2}{3} & \frac{1}{3} \\ \frac{0}{-20} & \frac{0}{-20} & \frac{-20}{-20} & \frac{-20}{-20} \end{array} \right) = \left(\begin{array}{ccc|c} 1 & -\frac{6}{5} & \frac{4}{5} & \frac{3}{5} \\ 0 & 1 & -\frac{2}{3} & \frac{1}{3} \\ 0 & 0 & 1 & 1 \end{array} \right) \Leftrightarrow \begin{cases} x - \frac{6}{5}y + \frac{4}{5}z = \frac{3}{5} \\ y - \frac{2}{3}z = \frac{1}{3} \\ z = 1 \end{cases}$$

$$\begin{cases} z = 1 \\ y = \frac{2}{3}z + \frac{1}{3} = \frac{2 \cdot 1 + 1}{3} = \frac{2 + 1}{3} = \frac{3}{3} = 1 \\ x = \frac{6}{5}y - \frac{4}{5}z + \frac{3}{5} = \frac{6 \cdot 1 - 4 \cdot 1 + 3}{5} = \frac{6 - 4 + 3}{5} = \frac{5}{5} = 1 \end{cases} \begin{cases} 5x - 6y + 4z = 5 - 6 + 4 = 3 \\ 3x - 3y + 2z = 3 - 3 + 2 = 2 \\ 4x - 5y + 2z = 4 - 5 + 2 = 1 \end{cases}$$

$$\triangle x = y = z = 1$$

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$$\begin{cases} 4x - 3y + 2z + 4 = 0 \\ 6x - 2y + 3z + 1 = 0 \\ 5x - 3y + 2z + 3 = 0 \end{cases} \quad \begin{cases} x = \\ y = \\ z = \end{cases}$$

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$$\begin{cases} 4x - 3y + 2z + 4 = 0 \\ 6x - 2y + 3z + 1 = 0 \\ 5x - 3y + 2z + 3 = 0 \end{cases} \quad \begin{cases} 4x - 3y + 2z = -4 \\ 6x - 2y + 3z = -1 \\ 5x - 3y + 2z = -3 \end{cases} \quad \begin{pmatrix} 4 & -3 & 2 \\ 6 & -2 & 3 \\ 5 & -3 & 2 \end{pmatrix} \begin{pmatrix} x \\ y \\ z \end{pmatrix} = \begin{pmatrix} -4 \\ -1 \\ -3 \end{pmatrix} \quad \begin{pmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{pmatrix} \begin{pmatrix} x \\ y \\ z \end{pmatrix} = \begin{pmatrix} b_1 \\ b_2 \\ b_3 \end{pmatrix}$$

$$\Delta = \det \begin{pmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{pmatrix} = \det \begin{pmatrix} 4 & -3 & 2 \\ 6 & -2 & 3 \\ 5 & -3 & 2 \end{pmatrix} = 4(-2)2 + (-3)3 \cdot 5 + 2 \cdot 6(-3) -$$

$$= -16 - 45 - 36 + 20 + 36 + 36 =$$

$$= -61 + 58 = -5$$

$$\Delta_1 = \det \begin{pmatrix} b_1 & a_{12} & a_{13} \\ b_2 & a_{22} & a_{23} \\ b_3 & a_{32} & a_{33} \end{pmatrix} = \det \begin{pmatrix} -4 & -3 & 2 \\ -1 & -2 & 3 \\ -3 & -3 & 2 \end{pmatrix} = (-4)(-2)2 + (-3)3(-3) + 2(-1)(-3) -$$

$$= 16 + 27 + 6 - 12 - 6 - 36 =$$

$$= 43 - 48 = -5$$

$$\Delta_2 = \det \begin{pmatrix} a_{11} & b_1 & a_{13} \\ a_{21} & b_2 & a_{23} \\ a_{31} & b_3 & a_{33} \end{pmatrix} = \det \begin{pmatrix} 4 & -4 & 2 \\ 6 & -1 & 3 \\ 5 & -3 & 2 \end{pmatrix} = 4(-1)2 + (-4)3 \cdot 5 + 2 \cdot 6(-3) -$$

$$= -8 - 60 - 36 + 10 + 48 + 36 =$$

$$= -68 + 58 = -10$$

$$\Delta_3 = \det \begin{pmatrix} a_{11} & a_{12} & b_1 \\ a_{21} & a_{22} & b_2 \\ a_{31} & a_{32} & b_3 \end{pmatrix} = \det \begin{pmatrix} 4 & -3 & -4 \\ 6 & -2 & -1 \\ 5 & -3 & -3 \end{pmatrix} = 4(-2)(-3) + (-3)(-1)5 + (-4)6(-3) -$$

$$= 24 + 15 + 72 - 40 - 54 - 12 =$$

$$= 111 - 106 = 5$$

$$\begin{cases} x = x_1 = \frac{\Delta_1}{\Delta} = \frac{-5}{-5} = 1 \\ y = x_2 = \frac{\Delta_2}{\Delta} = \frac{-10}{-5} = 2 \\ z = x_3 = \frac{\Delta_3}{\Delta} = \frac{5}{-5} = -1 \end{cases}$$

$$\Delta x = 1 \mid y = 2 \mid z = -1$$

$$\begin{cases} 4x - 3y + 2z + 4 = 4 \cdot 1 - 3 \cdot 2 + 2(-1) + 4 = 4 - 6 - 2 + 4 = 0 \\ 6x - 2y + 3z + 1 = 6 \cdot 1 - 2 \cdot 2 + 3(-1) + 1 = 6 - 4 - 3 + 1 = 0 \\ 5x - 3y + 2z + 3 = 5 \cdot 1 - 3 \cdot 2 + 2(-1) + 3 = 5 - 6 - 2 + 3 = 0 \end{cases}$$

-77-

$$\begin{cases} 5x + 2y + 3z + 2 = 0 \\ 2x - 2y + 5z = 0 \\ 3x + 4y + 2z + 10 = 0 \end{cases} \quad ; \quad \begin{cases} x = \\ y = \\ z = \end{cases}$$

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$$\begin{cases} 5x + 2y + 3z + 2 = 0 \\ 2x - 2y + 5z = 0 \\ 3x + 4y + 2z + 10 = 0 \end{cases} \quad \begin{cases} 5x + 2y + 3z = -2 \\ 2x - 2y + 5z = 0 \\ 3x + 4y + 2z = -10 \end{cases} \quad \begin{pmatrix} 5 & 2 & 3 \\ 2 & -2 & 5 \\ 3 & 4 & 2 \end{pmatrix} \begin{pmatrix} x \\ y \\ z \end{pmatrix} = \begin{pmatrix} -2 \\ 0 \\ -10 \end{pmatrix} ; \begin{pmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{pmatrix} \begin{pmatrix} x_1 \\ x_2 \\ x_3 \end{pmatrix} = \begin{pmatrix} b_1 \\ b_2 \\ b_3 \end{pmatrix}$$

$$\Delta = \det \begin{pmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{pmatrix} = \det \begin{pmatrix} 5 & 2 & 3 \\ 2 & -2 & 5 \\ 3 & 4 & 2 \end{pmatrix} = 5(-2)2 + 2 \cdot 5 \cdot 3 + 3 \cdot 2 \cdot 4 - \\ - 3(-2)3 - 2 \cdot 2 \cdot 2 - 5 \cdot 5 \cdot 4 = \\ = -20 + 30 + 24 + 18 - 8 - 100 = 72 - 128 = -56$$

$$\Delta_1 = \det \begin{pmatrix} b_1 & a_{12} & a_{13} \\ b_2 & a_{22} & a_{23} \\ b_3 & a_{32} & a_{33} \end{pmatrix} = \det \begin{pmatrix} -2 & 2 & 3 \\ 0 & -2 & 5 \\ -10 & 4 & 2 \end{pmatrix} = (-2)(-2)2 + 2 \cdot 5 \cdot (-10) + 3 \cdot 0 \cdot 4 - \\ - 3(-2)(-10) - 2 \cdot 0 \cdot 2 - (-2)5 \cdot 4 = \\ = 8 - 100 + 0 - 60 + 0 + 40 = 48 - 160 = -112$$

$$\Delta_2 = \det \begin{pmatrix} a_{11} & b_1 & a_{13} \\ a_{21} & b_2 & a_{23} \\ a_{31} & b_3 & a_{33} \end{pmatrix} = \det \begin{pmatrix} 5 & -2 & 3 \\ 2 & 0 & 5 \\ 3 & -10 & 2 \end{pmatrix} = 5 \cdot 0 \cdot 2 + (-2) \cdot 5 \cdot 3 + 3 \cdot 2 \cdot (-10) - \\ - 3 \cdot 0 \cdot 3 - (-2)2 \cdot 2 - 5 \cdot 5 \cdot (-10) = \\ = 0 - 30 - 60 + 0 + 8 + 250 = 258 - 90 = 168$$

$$\Delta_3 = \det \begin{pmatrix} a_{11} & a_{12} & b_1 \\ a_{21} & a_{22} & b_2 \\ a_{31} & a_{32} & b_3 \end{pmatrix} = \det \begin{pmatrix} 5 & 2 & -2 \\ 2 & -2 & 0 \\ 3 & 4 & -10 \end{pmatrix} = 5(-2)(-10) + 2 \cdot 0 \cdot 3 + (-2)2 \cdot 4 - \\ - (-2)(-2)3 - 2 \cdot 2 \cdot (-10) - 5 \cdot 0 \cdot 4 = \\ = 100 + 0 - 16 - 12 + 40 - 0 = 140 - 28 = 112$$

$$\begin{cases} x = x_1 = \frac{\Delta_1}{\Delta} = \frac{-112}{-56} = 2 \\ y = x_2 = \frac{\Delta_2}{\Delta} = \frac{168}{-56} = -3 \\ z = x_3 = \frac{\Delta_3}{\Delta} = \frac{112}{-56} = -2 \end{cases} \quad \begin{cases} 5x + 2y + 3z + 2 = 5 \cdot 2 + 2 \cdot (-3) + 3 \cdot (-2) + 2 = 10 - 6 - 6 + 2 = 0 \\ 2x - 2y + 5z = 2 \cdot 2 - 2 \cdot (-3) + 5 \cdot (-2) = 4 + 6 - 10 = 0 \\ 3x + 4y + 2z + 10 = 3 \cdot 2 + 4 \cdot (-3) + 2 \cdot (-2) + 10 = 6 - 12 - 4 + 10 = 0 \end{cases}$$

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$$x = 2 \wedge y = -3 \wedge z = -2$$

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