Решить:

$AX = B$

$$A = \begin{pmatrix} 5 & 7 & 6 & 5 \\ 7 & 10 & 8 & 7 \\ 6 & 8 & 10 & 9 \\ 5 & 7 & 9 & 10 \end{pmatrix}, \quad B = \begin{pmatrix} 23 \\ 32 \\ 33 \\ 31 \end{pmatrix}$$

$X = 1$ — найти.

до 5 числа после запятой

$$\left(\begin{array}{cccc|c} 5 & 7 & 6 & 5 & 23 \\ 7 & 10 & 8 & 7 & 32 \\ 6 & 8 & 10 & 9 & 33 \\ 5 & 7 & 9 & 10 & 31 \end{array}\right) :5 \approx \left(\begin{array}{cccc|c} 1 & 7/5 & 6/5 & 1 & 23/5 \\ 7 & 10 & 8 & 7 & 32 \\ 6 & 8 & 10 & 9 & 33 \\ 5 & 7 & 9 & 10 & 31 \end{array}\right) \begin{matrix} \\ \text{II} - 7\text{I} \\ \text{III} - 6\text{I} \\ \text{IV} - 5\text{I} \end{matrix} \approx$$

$$\left(\begin{array}{cccc|c} 1 & 7/5 & 6/5 & 1 & 23/5 \\ 0 & 1/5 & -2/5 & 0 & -1/5 \\ 0 & -2/5 & 14/5 & 3 & 27/5 \\ 0 & 0 & 3 & 5 & 8 \end{array}\right) \text{II} : \tfrac{1}{5} \approx \left(\begin{array}{cccc|c} 1 & 7/5 & 6/5 & 1 & 23/5 \\ 0 & 1 & -2 & 0 & -1 \\ 0 & -2/5 & 14/5 & 3 & 27/5 \\ 0 & 0 & 3 & 5 & 8 \end{array}\right) \text{III} + \tfrac{2}{5}\text{II} \sim$$

$$\left(\begin{array}{cccc|c} 1 & 7/5 & 6/5 & 1 & 23/5 \\ 0 & 1 & -2 & 0 & -1 \\ 0 & 0 & 2 & 0 & 5 \\ 0 & 0 & 3 & 5 & 8 \end{array}\right) \text{III} : 2 \sim \left(\begin{array}{cccc|c} 1 & 7/5 & 6/5 & 1 & 23/5 \\ 0 & 1 & -2 & 0 & -1 \\ 0 & 0 & 1 & 0 & 5/2 \\ 0 & 0 & 3 & 5 & 8 \end{array}\right) \text{IV} - 3\text{III} \sim$$

$$\left(\begin{array}{cccc|c} 1 & 7/5 & 6/5 & 1 & 23/5 \\ 0 & 1 & -2 & 0 & -1 \\ 0 & 0 & 1 & 0 & 5/2 \\ 0 & 0 & 0 & 5 & 1/2 \end{array}\right) :5 \sim \left(\begin{array}{cccc|c} 1 & 7/5 & 6/5 & 1 & 23/5 \\ 0 & 1 & -2 & 0 & -1 \\ 0 & 0 & 1 & 0 & 5/2 \\ 0 & 0 & 0 & 1 & 1/10 \end{array}\right)$$