$$\left[\begin{array}{ccc|c} 3 & 1 & -1 & 10 \\ 2 & 1 & 2 & 5 \\ -2 & 2 & 3 & 1 \end{array}\right] \xrightarrow{R1\to\frac{1}{3}R1} \left[\begin{array}{ccc|c} 1 & 1/3 & -1/3 & 10/3 \\ 2 & 1 & 2 & 5 \\ -2 & 2 & 3 & 1 \end{array}\right] \xrightarrow{R2\to R2-2R1}$$

$$\left[\begin{array}{ccc|c} 1 & 1/3 & -1/3 & 10/3 \\ 0 & 1/3 & 8/3 & -5/3 \\ -2 & 2 & 3 & 1 \end{array}\right] \xrightarrow{R3\to R3+2R1} \left[\begin{array}{ccc|c} 1 & 1/3 & -1/3 & 10/3 \\ 0 & 1/3 & 8/3 & -5/3 \\ 0 & 8/3 & 7/3 & \frac{23}{3} \end{array}\right] \xrightarrow{R2\to 3R2}$$

$$\left[\begin{array}{ccc|c} 1 & 1/3 & -1/3 & 10/3 \\ 0 & 1 & 8 & -5 \\ 0 & 8/3 & 7/3 & \frac{23}{3} \end{array}\right] \xrightarrow{R1\to R1-\frac{1}{3}R2} \left[\begin{array}{ccc|c} 1 & 0 & -3 & 5 \\ 0 & 1 & 8 & -5 \\ 0 & 8/3 & 7/3 & \frac{23}{3} \end{array}\right] \xrightarrow{R3\to R3-\frac{8}{3}R2}$$

$$\left[\begin{array}{ccc|c} 1 & 0 & -3 & 5 \\ 0 & 1 & 8 & -5 \\ 0 & 0 & -19 & 21 \end{array}\right] \xrightarrow{R3\to\frac{-1}{19}R3} \left[\begin{array}{ccc|c} 1 & 0 & -3 & 5 \\ 0 & 1 & 8 & -5 \\ 0 & 0 & 1 & -\frac{21}{19} \end{array}\right] \xrightarrow{R1\to R1+3R3}$$

$$\left[\begin{array}{ccc|c} 1 & 0 & 0 & \frac{32}{19} \\ 0 & 1 & 8 & -5 \\ 0 & 0 & 1 & -\frac{21}{19} \end{array}\right] \xrightarrow{R2\to R2-8R3} \left[\begin{array}{ccc|c} 1 & 0 & 0 & \frac{32}{19} \\ 0 & 1 & 0 & \frac{73}{19} \\ 0 & 0 & 1 & -\frac{21}{19} \end{array}\right]$$