

$$\left[\begin{array}{ccc|c} 1 & -2 & 1 & 1 \\ 2 & -6 & 6 & 4 \\ -3 & 5 & -1 & -2 \end{array} \right] \xrightarrow{\text{R2} \leftarrow \text{R2} - 2\text{R1}, \text{R3} \leftarrow \text{R3} + 3\text{R1}} \left[\begin{array}{ccc|c} 1 & -2 & 1 & 1 \\ 0 & -2 & 4 & 0 \\ 0 & -1 & 2 & 1 \end{array} \right]$$

$$\left[\begin{array}{ccc|c} 1 & -2 & 1 & 1 \\ 0 & -2 & 4 & 0 \\ 0 & -1 & 2 & 1 \end{array} \right] \xrightarrow{\text{R2} \leftarrow \frac{1}{-2}\text{R2}, \text{R3} \leftarrow \text{R3} - \text{R2}} \left[\begin{array}{ccc|c} 1 & -2 & 1 & 1 \\ 0 & 1 & -2 & 0 \\ 0 & 0 & 0 & 1 \end{array} \right]$$

$$2 + 4(-\frac{1}{10}) = 2 - \frac{4}{10} = \frac{20}{10} - \frac{4}{10} = \frac{16}{10} = \frac{8}{5}$$

$$\left[\begin{array}{ccc|c} 1 & -2 & 1 & 1 \\ 0 & 1 & -2 & 0 \\ 0 & 0 & 0 & 1 \end{array} \right] \xrightarrow{\text{R1} \leftarrow \text{R1} + 2\text{R2}} \left[\begin{array}{ccc|c} 1 & 0 & -3 & 1 \\ 0 & 1 & -2 & 0 \\ 0 & 0 & 0 & 1 \end{array} \right] \xrightarrow{\text{R1} \leftarrow \text{R1} + 3\text{R2}} \left[\begin{array}{ccc|c} 1 & 0 & -1 & 1 \\ 0 & 1 & -2 & 0 \\ 0 & 0 & 0 & 1 \end{array} \right]$$

$$1 + 2(-\frac{1}{10}) = 1 - \frac{2}{10} = 1 - \frac{1}{5} = \frac{4}{5}$$