$$x_1^{(2)} = (0 \quad 0 \quad 0)\begin{pmatrix}1\\1\\1\end{pmatrix} + 1 = 1$$

$$\rightsquigarrow \begin{pmatrix}1\\1\\0.8\end{pmatrix}$$

$$x_2^{(2)} = \left(-\frac{1}{3} \quad 0 \quad -\frac{2}{3}\right)\begin{pmatrix}1\\1\\4/5\end{pmatrix} + 2 = -\frac{5}{15} - \frac{8}{15} + \frac{30}{15} = \frac{17}{15}$$

$$\rightsquigarrow \begin{pmatrix}1\\ \frac{17}{15}\\ \frac{4}{5}\end{pmatrix}$$

$$x_3^{(2)} = \left(-\frac{3}{5} \quad \frac{4}{5} \quad 0\right)\begin{pmatrix}1\\ \frac{17}{15}\\ \frac{4}{5}\end{pmatrix} + \frac{3}{5} = -\frac{3}{5} + \frac{68}{75} + \frac{3}{5}$$

$$= \frac{68}{75}$$

$$x^{(2)} = \begin{pmatrix}1\\ \frac{17}{15}\\ \frac{68}{75}\end{pmatrix} \qquad \frac{1}{4}$$

$$\| x^{(2)} - x^{(1)} \|_\infty = \frac{2}{15} = 0.1333$$

$$\Rightarrow d_r(x^{(2)}, x^{(1)}) = \frac{\frac{2}{15}}{\frac{17}{15}} = \frac{2}{17} = 0.1176 < \varepsilon \qquad \frac{1}{4}$$

k	$x^{(k)}$	$d_r(x^{(k)}, x^{(k-1)})$
1	$\begin{pmatrix}1\\1\\0.8\end{pmatrix}$	$0.2 = \frac{1}{5}$
2	$\begin{pmatrix}1\\17/15\\68/75\end{pmatrix} = \begin{pmatrix}1\\1.1333\\0.9067\end{pmatrix}$	$\frac{2}{17} = 0.1176 < \varepsilon$