Exercise: Local CS

(1) Local coordinate-axes

An observer is located at (20, 40, -20) and looks at (80, -20, 20). Prove that the local x- and y-axes below fit this situation.

$$\vec{x} = \begin{pmatrix} 0.555 \\ 0 \\ -0.832 \end{pmatrix} \qquad \vec{y} = \begin{pmatrix} 0.532 \\ 0.769 \\ 0.355 \end{pmatrix}$$

(a) Which constrains do you need to check?

(b) Perform the check now.