1. Given the vector $\mathbf{a} = \begin{pmatrix} 5 \\ -9 \\ 8 \end{pmatrix}$ find $\hat{\mathbf{a}}$ (that is, normalize $\mathbf{a}$).

2. Given the vector $\mathbf{a} = \begin{pmatrix} 1 \\ -2 \\ -7 \end{pmatrix}$ find $\hat{\mathbf{a}}$ (that is, normalize $\mathbf{a}$).

3. Given the vector $\mathbf{a} = \begin{pmatrix} 7 \\ 5 \\ -3 \end{pmatrix}$ find $\hat{\mathbf{a}}$ (that is, normalize $\mathbf{a}$).

4. Given the vector $\mathbf{a} = \begin{pmatrix} -1 \\ 6 \\ -2 \end{pmatrix}$ find $\hat{\mathbf{a}}$ (that is, normalize $\mathbf{a}$).

5. Given the vector $\mathbf{a} = \begin{pmatrix} 1 \\ -5 \\ -3 \end{pmatrix}$ find $\hat{\mathbf{a}}$ (that is, normalize $\mathbf{a}$).