1.1.4.The parametric equation for AB is given by

$$\mathbf{x} = \mathbf{A} + k\mathbf{m} \tag{1}$$

$$\text{where, } \mathbf{m} = \mathbf{B} - \mathbf{A} \tag{2}$$

$$= \begin{pmatrix} -4 \\ 6 \end{pmatrix} - \begin{pmatrix} 1 \\ -1 \end{pmatrix}$$
$$= \begin{pmatrix} -5 \\ 7 \end{pmatrix} \tag{3}$$

Hence we get

$$\text{AB: } \mathbf{x} = \begin{pmatrix} 1 \\ -1 \end{pmatrix} + k \begin{pmatrix} -5 \\ 7 \end{pmatrix} \tag{4}$$

Similarly,

$$\text{BC: } \mathbf{x} = \begin{pmatrix} -4 \\ 6 \end{pmatrix} + k \begin{pmatrix} 1 \\ -11 \end{pmatrix} \tag{5}$$

$$\text{CA: } \mathbf{x} = \begin{pmatrix} -3 \\ -5 \end{pmatrix} + k \begin{pmatrix} 4 \\ 4 \end{pmatrix} \tag{6}$$