INVARIANT POINTS AND LINES
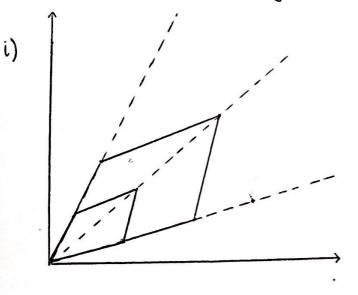
Exercise 1: Find the invariant points under the transformation given by the matrix $\begin{pmatrix} 4 & 5 \\ 1 & 2 \end{pmatrix}$

Exercise 2: Find the invariant points under the transformation given by the matrix $\begin{pmatrix} 1 & 4 \\ 7 & 3 \end{pmatrix}$
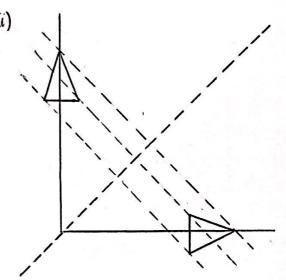
Exercise 3: Find the invariant points under the transformation given by the matrix $\begin{pmatrix} 5 & 1 \\ 8 & 3 \end{pmatrix}$

Exercise 4: a) Identify the lines on the following diagrams that are invariant lines

b) Define the general form of the invariant lines in the following diagrams

i)

enlargement, centre (0,0)

ii)

reflection in the line $y=x$