

Lines of Invariant Points

For each transformation matrix, find the equation of any lines of invariant points.

(a)	(b)	(c)	(d)
$\begin{pmatrix} 0 & 1 \\ 1 & 0 \end{pmatrix}$	$\begin{pmatrix} 0 & -1 \\ -1 & 0 \end{pmatrix}$	$\begin{pmatrix} 4 & -1 \\ 3 & 0 \end{pmatrix}$	$\begin{pmatrix} 3 & -1 \\ -2 & 2 \end{pmatrix}$
(e)	(f)	(g)	(h)
$\begin{pmatrix} -4 & -1 \\ 5 & 2 \end{pmatrix}$	$\begin{pmatrix} 2 & -2 \\ -1 & 3 \end{pmatrix}$	$\begin{pmatrix} -1 & 3 \\ 4 & -5 \end{pmatrix}$	$\begin{pmatrix} 2 & -3 \\ 1 & 6 \end{pmatrix}$
(i)	(j)	(k)	(l)
$\begin{pmatrix} 0 & \frac{1}{2} \\ 4 & -1 \end{pmatrix}$	$\begin{pmatrix} -\frac{3}{2} & 2 \\ 5 & -\frac{1}{2} \end{pmatrix}$	$\begin{pmatrix} 1 - \sqrt{3} & 1 \\ \sqrt{3} & -1 \end{pmatrix}$	$\begin{pmatrix} 2a + 1 & 2 \\ -4a & -3 \end{pmatrix}$