Invariant Lines

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

(a)	**(b)**	**(c)**	**(d)**
$\begin{pmatrix} -1 & 1 \\ 10 & 2 \end{pmatrix}$	$\begin{pmatrix} 0 & 1 \\ -3 & 4 \end{pmatrix}$	$\begin{pmatrix} -4 & 0 \\ 0 & 1 \end{pmatrix}$	$\begin{pmatrix} 5 & 2 \\ 4 & 3 \end{pmatrix}$
$y = 5x$ and $y = -2x$	$y = x$ and $y = 3x + c$	$y = c$	$y = x + c$ and $y = -2x$
(e)	**(f)**	**(g)**	**(h)**
$\begin{pmatrix} 2 & 3 \\ 4 & -9 \end{pmatrix}$	$\begin{pmatrix} 7 & 1 \\ -5 & 6 \end{pmatrix}$	$\begin{pmatrix} 2 & 1 \\ 0 & 3 \end{pmatrix}$	$\begin{pmatrix} 7 & 9 \\ 4 & 7 \end{pmatrix}$
$y = \frac{1}{3}x$ and $y = -4x$	No invariant lines	$y = c$ and $y = x$	$y = \frac{2}{3}x + c$ and $y = -\frac{2}{3}x$