4(a)	A rotation, followed by a shear.
4(b)	$\mathbf{M}=\begin{pmatrix}\cos\theta+2\sin\theta & 2\cos\theta-\sin\theta\\ \sin\theta & \cos\theta\end{pmatrix}$
	$\begin{pmatrix}\cos\theta+2\sin\theta & 2\cos\theta-\sin\theta\\ \sin\theta & \cos\theta\end{pmatrix}\begin{pmatrix}x\\ y\end{pmatrix}=\begin{pmatrix}x\cos\theta+2x\sin\theta-y\sin\theta+2y\cos\theta\\ x\sin\theta+y\cos\theta\end{pmatrix}$
	$x\sin\theta+y\cos\theta=y$ AND $x\cos\theta+2x\sin\theta-y\sin\theta+2y\cos\theta=x$ $\Rightarrow x\cos\theta+2x\sin\theta+\dfrac{x\sin\theta}{1-\cos\theta}(2\cos\theta-\sin\theta)=x$
	$(\cos\theta+2\sin\theta)(1-\cos\theta)+2\sin\theta\cos\theta-\sin^2\theta=1-\cos\theta$ $\cos\theta-\cos^2\theta+2\sin\theta-\sin^2\theta=1-\cos\theta\Rightarrow\sin\theta+\cos\theta=1$
	$\theta=\frac{1}{2}\pi$