Name:

## Linear Algebra II - Quiz 5

All the solutions should be properly justified and explained. Clarity of the presentation will also be rewarded.

The maximal number of points awarded is 10.

Let  $\theta, \varphi \in \mathbb{R}$ . Prove that the following matrix is orthogonal:

$\cos \theta$	$\sin\theta\cos\varphi$	$\sin\theta\sin\varphi$	
$-\sin\theta$	$\cos\theta\cos\varphi$	$\cos\theta\sin\varphi$	
0	$-\sin \varphi$	$\cos \varphi$	