(1) Exercise 1.1 of Fulton and Harris.

(2) Show that if $V, W$ are representations of $G$ then $Hom(V, W)$ is as well, and for $\phi \in Hom(V, W)$, we have $(g\phi)(v) = g\phi(g^{-1}v)$.

(3) Show that if $U, V, W$ are vector spaces then

$$V \otimes (U \oplus W) = (V \otimes U) \oplus (V \otimes W).$$

Show also that

$$\Lambda^k(V \oplus W) = \oplus_{a+b=k} \Lambda^a V \otimes \Lambda^b W.$$ 

(4) Show that if $M \in GL(V)$ and $M^2 = I$ then $V = V_+ \oplus V_-$ where $M$ is the identity on $V_+$ and minus the identity on $V_-$. 
