Questions

1. Can dd $\rightarrow \alpha\pi^0$ be a strong interaction? (That's d as in deuteron not d as in down.)
2. In general terms, what does I-spin symmetry say?
3. More precisely, what are the consequences?
4. What is the group associated with I-spin?
5. How can you guess that from your knowledge of group representations and a couple of phenomenological facts?
6. Is I-spin a symmetry of the EM interactions? How can you see that very easily?
7. The rate for $\eta \rightarrow 3\pi$ is comparable to the rate for $\eta \rightarrow 2\gamma$.
   a) Is this odd?
   b) Is $\eta \rightarrow 3\pi$ a strong decay? Why or why not?
8. Is $\rho^0 \rightarrow \pi^0\pi^0$ a strong decay?
9. What are the quark flavors associated with I-spin?
10. For what interactions are the flavor quantum numbers conserved?