# Exercise 2 - Ramsey (10 points)

There is a famous result from recreational mathematics that says that, in every graph with 6 vertices (aka points) there is either a 'clique' of order 3 or an 'anticlique' of order 3, by which is meant, that there are  
either:

1. 3 vertices, each pair of which are mutually connected by an edge, ('clique')

or

1. 3 vertices, *no* pair of which are mutually connected by an edge ('anticlique')

Some texts then add the remark that the number 6 is the smallest number with this property, which would imply that there exists at least one graph with 5 vertices in which there is no clique of order 3, and no anticlique of order 3.  
Hence the following exercise:  
Let Z3 find a graph with 5 vertices such that no 3 vertices form a clique, and no 3 vertices form an anticlique.

*(see:* [Ramsey's theorem - Wikipedia](https://en.wikipedia.org/wiki/Ramsey%27s_theorem)*)*

*Good luck!*