Problem 1 (due Monday, February 5)

Consider a convex polyhedron whose every face is a triangle. We color the vertices of the polyhedron in 3 colors. Prove that the number of faces of the polyhedron whose vertices are of all three colors is even.

We received solutions from Sasha Aksenchuk and Maximo Rodriguez. Both solvers observe that a polyhedron with triangular faces has an even number of faces and use it in their solutions. For a complete solution see the following link Solution.