Problem 4 (due Monday, March 20)

Let $f(x)$ be a polynomial of degree n with n distinct real roots. Prove that the polynomial \[f(x)f''(x)-(f'(x))^2\] has no real roots.

We received solutions from Prof. Vladislav Kargin, Ashton Keith, Krishnaraj Sambath, and Thomas Wu. One of the solutions was not correct, the others were essentially the same as our original solution. For a detailed solution see the following link Solution.