

Problem of the Week-5: Irreducible Quadratics over \mathbb{F}_q

Let \mathbb{F}_q denote the finite field with q elements. Find the number of monic, irreducible, quadratic polynomials over \mathbb{F}_q . Recall that, a polynomial is called monic if its leading coefficient is 1.

As always, show your work, fully explain and justify your answer.

Posting Date 10/25/14. Submit solutions to Noah Aydin, Mathematics Department, RBH 319 (e-mail or hard-copy, but hard copy submissions must include a time stamp) by 5 pm on 11/7/14.