

Problem 2: Find the Polynomial

Find all polynomials $p(x)$ over reals that satisfy the identity

$$p(2x - 1) - p(x - 2) = 6x^2 - 3x - 9$$

As always, show your work, fully explain and justify your answer. A solution mainly obtained by computers or calculators will not be accepted.

Posting Date 1/26/2018. Submit solutions to Noah Aydin, Mathematics Department, RBH 319 (e-mail or hard-copy, but hard copy submissions must include a time stamp) by 4 pm on 2/9/17.