

Ghosh's monic septic equation has roots expressible in radicals

Soumadeep Ghosh

Kolkata, India

Abstract

In this paper, I describe the roots of my monic septic equation, which are expressible in radicals.
The paper ends with "The End"

Introduction

In a previous paper, I've described one of the roots of the quartic equation and how that can be used to solve the general quartic equation in radicals.
In a previous paper, I've described my monic septic. In this paper, I describe the roots of my monic septic equation, which are expressible in radicals.

Ghosh's monic septic equation has roots expressible in radicals

When

$$Q \neq 0$$

by the right hand side of Ghosh's monic septic identity,

Ghosh's monic septic equation

$$\left(x^4 + Px^3 + (b - aP + P^2 - Q)x^2 + \left(\frac{f - g}{Q}\right)x + \frac{g}{Q}\right)(x^3 + (a - P)x^2 + Qx + Q) = 0$$

can be written as the product of a quartic equation and a cubic equation, both of which can be solved in radicals.

The End