

# ZEROS SOLUTION OF THE COMPLEX BERNOULLI EQUATION

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Abstract. In accordance to the classical theory of ordinary differential equations we define the Bernoulli complex differential equation  $w'(z) = A(z)w + B(z)w^2$ . Here  $w(z) = u(x, y) + iv(x, y)$  is unknown function, the coefficients  $A(z)$  and  $B(z)$  are analytical functions of complex variable  $z = x + iy$ . While after the year 2000, the number of zero solutions of this equation was not seriously study, the complex differential equation of oscillations certainly was (see [1],[2]). That is why, in this paper we formulate the theorems for existence of zeros of Bernoulli equation. We will show that this problem is neither trivial or easy.

Keywords. The Bernoulli equation, The zero solution