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**Special Type of Bernoulli Polynomials and Hyperbolic Fibonacci Functions**

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**Abstract**

Bernoulli numbers and Bernoulli polynomials have been studied by many researchers recently, as they are widely used in mathematics, engineering and other disciplines. Hyperbolic functions are frequently observed in the mathematics and other disciplines. In recent years, studies on hyperbolic functions have gained more importance and the relationships between hyperbolic functions and different disciplines have been examined by several researchers. In this study, we investigate special Bernoulli polynomials in order to find the relationships between hyperbolic Fibonacci functions and the Bernoulli polynomials. In addition, we obtain the symmetrical Fibonacci sine and the symmetrical Fibonacci cosine functions for special Bernoulli polynomials. Also, by establishing a relationship between the special Bernoulli polynomials and the symmetrical Fibonacci sine, symmetrical Fibonacci cosine functions, we obtain newly identities.

**Keywords:** Hyperbolic Fibonacci functions, Bernoulli numbers, Bernoulli Polynomials.