

## A LOWER BOUND OF THE POWER EXPONENTIAL FUNCTION

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*Abstract.* In this paper, we consider the lower bound of the power exponential function  $a^{2b} + b^{2a}$  for nonnegative real numbers  $a$  and  $b$ . If  $a + b = 1$ , then it is known that the function has the maximum value 1, but it is no known that the minimum value. In this paper, we show that  $a^{2b} + b^{2a} > 6083/6144 \cong 0.990072$  for nonnegative real numbers  $a$  and  $b$  with  $a + b = 1$ .

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