MATHEMATICAL THEOREMS

RALPH HOWARD

Abstract. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Curabitur ex justo, pretium nec ante mattis, ultricies ultricies magna. Duis neque nulla, feugiat a consectetur id, fermentum a lorem. Vivamus sit amet est interdum, eleifend libero in, rutrum lorem.

1. Introduction

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Curabitur et ornare urna, ornare malesuada ante. Aenean fringilla fermentum pulvinar. Integer maximus mauris id gravida eleifend. Donec et facilisis neque. Astley R, Morris L [1]

Vestibulum massa nunc, pellentesque vitae velit vitae, porttitor efficitur nisl. Integer massa lacus, tristique a laoreet vitae, commodo sed odio. Phasellus eget metus tempus sem molestie iaculis.

2. Mathematics

This formula is also referred to as the *binomial formula* or the *binomial identity*. It can be written as:

$$(x+y)^n = \sum_{k=0}^{n} \binom{n}{k} x^{n-k} y^k = \sum_{k=0}^{n} \binom{n}{k} x^k y^{n-k}$$

Theorem 2.1. *The square of any real number is non-negative.*

Proof. Any real number x satisfies $x > 0$, $x = 0$, or $x < 0$. If $x = 0$, then $x^2 = 0 >= 0$. If $x > 0$ then as a positive time a positive is positive we have $x^2 = xx > 0$. If $x < 0$ then $-x > 0$ and so by what we have just done $x^2 = (-x)^2 > 0$. So in all cases $x^2 \geq 0$. □

3. Summary

Aenean sagittis, nisl et egestas facilisis, mauris erat pulvinar turpis, tincidunt maximus tellus erat in ligula. Phasellus vitae lacinia nisi. Aliquam aliquam feugiat lectus sed congue. Ut ut molestie lacus. Nam id felis aliquam, pulvinar erat eu, luctus ligula. Vestibulum quis metus accumsan.

References

Astley, R., & Morris, L. (2020). At-scale impact of the Net Wok: A culinarically holistic investigation of distributed dumplings. *Armenian Journal of Proceedings*, *61*, 192–219.

Department of Mathematics, University of South Carolina, Columbia, SC 29208
Email address: howard\@math.sc.edu
URL: www.math.sc.edu/\~howard