NEW PROPERTIES OF THE ODD WEIBULL INVERSE TOPP-LEONE CUMULATIVE DISTRIBUTION FUNCTION

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Abstract. *In 2021 Almetwally introduced a new lifetime distribution named the odd Weibull inverted ToppLeone (OWITL) distribution. In this note we study one of the important characteristics "saturation" of this new cumulative function to the horizontal asymptote with respect to Hausdorff metric as we prove some estimates. In additional we consider a new adaptive model with "polynomial variable transfer". The applicability of the model is proved in simulation study to "COVID-19 data". Some numerical examples and software modules within the programming environment CAS MATHEMATICA are presented.*

Key words: odd Weibull inverted ToppLeone, adaptive odd Weibull inverted ToppLeone model with polynomial variable transfer, Hausdorff distance, Heaviside step function, Upper and lower bounds.

Mathematics Subject Classification: 41A46

Acknowledgments

This paper is supported by the National Scientific Program "Information and Communication Technologies for Unified Digital Market in Science, Education and Security (ICTinSES)", financed by the Ministry of Education and Science.

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