

# RE: Approximations to Standard Normal Distribution Function

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## 1 Errors

The list of 19 approximations from previous works contains a number of errors, with approximations 2, 9, 12 and 13 being affected. All of these make the same error of giving the survival function  $\bar{\Phi}(z) = 1 - \Phi(z)$  instead of the cumulative distribution function. Their ‘new’ approximation, 21, is identical to the previous approximation 18, but rewritten with fractions instead of decimals.

## 2 Replicability and Issues

The paper mostly provides sufficient information for total replication, with the only issue being a lack of version number given for MS Excel, which is used for its NORMDIST function to calculate the value of the normal cdf at a given point. As an alternative, we used the cdf function in Julia’s Distributions package with version 0.25.80, and Julia 1.8.5.