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   BINOMIAL REDUNDANT RELIABILITY WITH EXPONENTIAL OR WEIBULL FAILURE DISTRIBUTION
   (BINWEIB.BAS)

   ORIGINAL DATE: Circa 1986
   REVISION DATE: October 29, 2020
   AUTHOR: Phil Rutherford (www.philrutherford.com)
   RUN DATE: 29-10-2020 (DD-MM-YYYY)
   RUN TIME: 21:36:40
   RUN WITH MMBASIC.EXE (www.mmbasic.com)

   MINIMUM NUMBER OF OPERATING UNITS REQUIRED         ? 5
   MAXIMUM NUMBER OF REDUNDANT UNITS                  ? 5
   EXPONENTIAL OR WEIBULL FAILURE DISTRIBUTION (E/W)  ? E
   UNIT FAILURE RATE (PER HOUR)                       ? 0.00001
   MISSION TIME (HOURS)                               ? 8760

   BINOMIAL RELIABILITY RESULTS

   EXPONENTIAL FAILURE DISTRIBUTION
   FOR 5 UNITS REQUIRED AND ZERO TO 5 REDUNDANT UNITS AVAILABLE
   UNIT FAILURE RATE = 1e-05 PER HOUR (EXPONENTIAL)
   MISSION TIME = 8760 HOURS

   SINGLE UNIT RELIABILITY IS 0.9161272543                              Pr(=  1 / 1 .S)

   RELIABILITY OF 5 OPERATING AND 0 REDUNDANT UNITS IS 0.6453257829     Pr(=> 5 / 5 .S)
   RELIABILITY OF 5 OPERATING AND 1 REDUNDANT UNITS IS 0.9159520091     Pr(=> 5 / 6 .S)
   RELIABILITY OF 5 OPERATING AND 2 REDUNDANT UNITS IS 0.984046503      Pr(=> 5 / 7 .S)
   RELIABILITY OF 5 OPERATING AND 3 REDUNDANT UNITS IS 0.9973728048     Pr(=> 5 / 8 .S)
   RELIABILITY OF 5 OPERATING AND 4 REDUNDANT UNITS IS 0.9996082318     Pr(=> 5 / 9 .S)
   RELIABILITY OF 5 OPERATING AND 5 REDUNDANT UNITS IS 0.9999457163     Pr(=> 5 / 10 .S)
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