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MODELING OF RANDOM NUMBERS USING SPLINE-APPROXIMATIONS OF CUMULATIVE DISTRIBUTION FUNCTION

This work represents a complex algorithm of random numbers generation with the use of cumulative distribution function (CDF).

After construction of random number generator with the uniform distribution, some set of uniformly distributed numbers was obtained. The desired CDF was build and this set was pointed [F(x)].
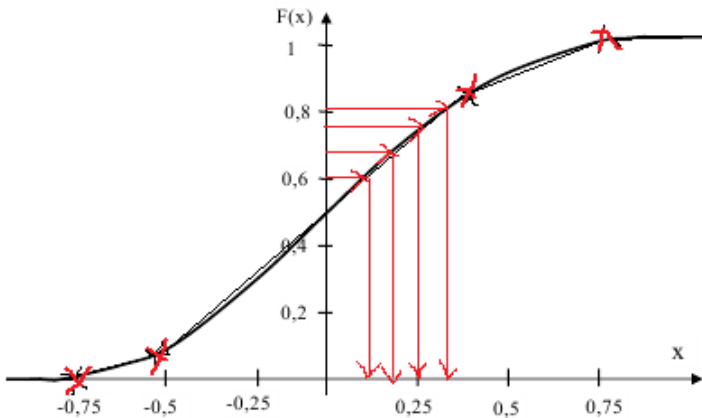
To obtain the desired new set of random numbers x, the inverse function of [F(x)] must be taken. But as the inverse function can't be taken analytically, we divide the CDF curve on the separate intervals and find out the x value using spline-approximation.

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