- Choose a distribution in the table

■ Please choose a distribution:

- ○ Input a distribution (pdf) in the box below (R sytax)
- ○ Beta Distribution
- ○ Chi-square Distribution
- ○ F Distribution
- ○ Laplace Distribution
- ◉ Normal Distribution
- ○ Weibull Distribution
- ○ Mixtrue of two normal
- ○ Beta-Normal Distribution
- ○ The Gumbel Distribution
- ○ Skew t distribution
- ○ Asymmetric Laplace Distribution: Univariate
- ○ Beta Laplace distribution
- ○ Double Gaussian (Two-Piece Normal) distribution
- ○ Pareto distribution
- ○ Log-Skew-Normal Distribution

- ○ Beta Prime Distribution
- ○ Exponential Distribution
- ○ Gamma Distribution
- ○ Logistic Distribution
- ○ Student's t distribution
- ○ Log Normal Distribution
- ○ Generalized normal distribution
- ○ Generalized Extreme Value Distribution
- ○ Skew-Normal Distribution
- ○ Inverse Gaussian Distribution
- ○ Arcsine-Gaussian Distribution
- ○ Double Exponential (Skew Laplace)
- ○ Double Logistic distribution
- ○ Alpha-Skew-Normal Distribution

```
mean=0; sd=1;

pdf <- function(x){dnorm(x,mean,sd)};
cdf <- function(x){pnorm(x,mean,sd)};
```

- Change the parameters for the distribution corresponding to your requirements

```
mean=2; sd=1;

pdf <- function(x){dnorm(x,mean,sd)};
cdf <- function(x){pnorm(x,mean,sd)};
```

- Input the number of points required and click RUN

Number of Points: [20] [RUN] ☐ Show details.

- Result will be displayed as follows with the value of the MSE-RPs, the probabilities and MSE

```
            rp              p
1    -0.9079408  0.004752685
2    -0.2787035  0.014574992
3     0.1430295  0.026168138
4     0.4765907  0.038153439
5     0.7615365  0.049623811
6     1.0163603  0.059948572
7     1.2514687  0.068675022
8     1.4735132  0.075478051
9     1.6872094  0.080131848
10    1.8962377  0.082493442
11    2.1037623  0.082493442
12    2.3127906  0.080131848
13    2.5264868  0.075478051
14    2.7485313  0.068675022
15    2.9836397  0.059948572
16    3.2384635  0.049623811
17    3.5234093  0.038153439
18    3.8569705  0.026168138
19    4.2787035  0.014574992
20    4.9079408  0.004752685
```

mse 0.006207624

- Or you can write a self-defined distribution (R Syntax in the box)

■ Please choose a distribution:

🔘 Input a distribution (pdf) in the box below (R sytax)

⭘ Beta Distribution	⭘ Beta Prime Distribution
⭘ Chi-square Distribution	⭘ Exponential Distribution
⭘ F Distribution	⭘ Gamma Distribution
⭘ Laplace Distribution	⭘ Logistic Distribution
⭘ Normal Distribution	⭘ Student's t distribution
⭘ Weibull Distribution	⭘ Log Normal Distribution
⭘ Mixtrue of two normal	⭘ Generalized normal distribution
⭘ Beta-Normal Distribution	⭘ Generalized Extreme Value Distribution
⭘ The Gumbel Distribution	⭘ Skew-Normal Distribution
⭘ Skew t distribution	⭘ Inverse Gaussian Distribution
⭘ Asymmetric Laplace Distribution: Univariate	⭘ Arcsine-Gaussian Distribution
⭘ Beta Laplace distribution	⭘ Double Exponential (Skew Laplace)
⭘ Double Gaussian (Two-Piece Normal) distribution	⭘ Double Logistic distribution
⭘ Pareto distribution	⭘ Alpha-Skew-Normal Distribution
⭘ Log-Skew-Normal Distribution	

```r
pdf <- function(x){


}

cdf <- function(x){
  temp<-function(x){integrate(pdf, -Inf, x, rel.tol = 1e-10,stop.on.error = FALSE)$value;}
  return(Vectorize(temp)(x))
}
```