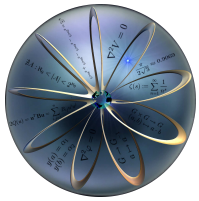

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survivor function

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Defines	survival time

Let Y be a random variable with cumulative probability distribution function $F_Y(y)$. Then the *survivor function* $S(y)$ is defined to be:

$$S(y) = 1 - F_Y(y) = P(Y \geq y).$$

The random variable Y is often called the *survival time*.

The survivor function is the probability of survival beyond time $Y = y$.

Examples. The three most commonly used distribution functions for survival time are:

1. `http://planetmath.org/ExponentialRandomVariable`exponential distribution, with $S(y) = \exp(-\gamma y)$.

2. Weibull distribution, with $S(y) = \exp(-y^\gamma)$ using the standard Weibull distribution.

3. extreme-value distribution, with $S(y) = \exp(-\exp(\frac{y-\alpha}{\beta}))$.