

Conditional Tail Expectation

[Nematrian website page: [ConditionalTailExpectation](#), © Nematrian 2015]

The conditional tail expectation (strictly speaking the 'right' or upper tail expectation, unless the context implies that we are interested in the 'left' or lower tail) is defined as:

$$CTE = E(X|X > k)$$

For a probability distribution with a continuous probability density function $f(x)$ with no upper bound we therefore have:

$$CTE = \frac{\int_k^{\infty} xf(x)dx}{\int_k^{\infty} f(x)dx}$$