

Triangular Fuzzy Number

The triangular fuzzy number (TFN) is a triangular fuzzy number that is represented by three points in form $A = (a_1, a_2, a_3)$ and has a membership function defined in the form:

$$\mu_{(A)}(x) = \begin{cases} 0, & x < a_1 \\ \frac{x - a_1}{a_2 - a_1}, & a_1 \leq x \leq a_2 \\ \frac{a_3 - x}{a_3 - a_2}, & a_2 \leq x \leq a_3 \\ 0, & x > a_3 \end{cases}$$

The α -cut process for the fuzzy triangular number in the interval A_α is given by the formula: