Assignment 5

Due on 2020-03-04, 00:59 IST.

1. What is a fuzzy number?

A fuzzy number is a real function defined over the unit interval [0, 1]. It can be seen as a generalization of a fuzzy set.

2. Assignment 5

Problem A

Consider two fuzzy numbers, A and B, with the universe of discourse X = [0, 1]. Suppose A and B are such that A(x) = 0.5 + 0.3x and B(x) = 0.8 - 0.2x. Determine the membership function values of their union and intersection.

3. Assignment 6

Problem B

Consider two fuzzy numbers, A and B, with the universe of discourse X = [0, 1]. Suppose A and B are such that A(x) = 0.3x + 0.2x^2 and B(x) = 0.4 - 0.2x. Determine the membership function values of their union and intersection.

4. Assignment 7

Problem C

Consider two fuzzy numbers, A and B, with the universe of discourse X = [0, 1]. Suppose A and B are such that A(x) = 0.5x and B(x) = 0.8 - 0.2x. Determine the membership function values of their union and intersection.

5. Assignment 8

Problem D

Consider two fuzzy numbers, A and B, with the universe of discourse X = [0, 1]. Suppose A and B are such that A(x) = 0.3x + 0.2x^2 and B(x) = 0.4 - 0.2x. Determine the membership function values of their union and intersection.

6. Assignment 9

Problem E

Consider two fuzzy numbers, A and B, with the universe of discourse X = [0, 1]. Suppose A and B are such that A(x) = 0.5x and B(x) = 0.8 - 0.2x. Determine the membership function values of their union and intersection.

7. Assignment 10

Problem F

Consider two fuzzy numbers, A and B, with the universe of discourse X = [0, 1]. Suppose A and B are such that A(x) = 0.3x + 0.2x^2 and B(x) = 0.4 - 0.2x. Determine the membership function values of their union and intersection.

8. Assignment 11

Problem G

Consider two fuzzy numbers, A and B, with the universe of discourse X = [0, 1]. Suppose A and B are such that A(x) = 0.5x and B(x) = 0.8 - 0.2x. Determine the membership function values of their union and intersection.

9. Assignment 12

Problem H

Consider two fuzzy numbers, A and B, with the universe of discourse X = [0, 1]. Suppose A and B are such that A(x) = 0.3x + 0.2x^2 and B(x) = 0.4 - 0.2x. Determine the membership function values of their union and intersection.

10. Assignment 13

Problem I

Consider two fuzzy numbers, A and B, with the universe of discourse X = [0, 1]. Suppose A and B are such that A(x) = 0.5x and B(x) = 0.8 - 0.2x. Determine the membership function values of their union and intersection.

11. Assignment 14

Problem J

Consider two fuzzy numbers, A and B, with the universe of discourse X = [0, 1]. Suppose A and B are such that A(x) = 0.3x + 0.2x^2 and B(x) = 0.4 - 0.2x. Determine the membership function values of their union and intersection.

12. Assignment 15

Problem K

Consider two fuzzy numbers, A and B, with the universe of discourse X = [0, 1]. Suppose A and B are such that A(x) = 0.5x and B(x) = 0.8 - 0.2x. Determine the membership function values of their union and intersection.