Two Fuzzy sets defined by

$$A = \{ (x_1, 0.2) (x_2, 0.5) (x_3, 0.6) \}$$

$$B = \{ (x_1, 0.1) (x_2, 0.4) (x_3, 0.5) \}$$

(i) product of Fuzzy sets
(ii) Intersection
(iii) Complement.

$$\boxed{\mu_{A \times B} = \mu_A \times \mu_B}$$

(i) $A \times B = \{ (x_1, 0.2 \times 0.1) (x_2, 0.5 \times 0.4) (x_3, 0.6 \times 0.5) \}$

$$= \{ (x_1, 0.02), (x_2, 0.2), (x_3, 0.3) \}$$

$$\mu_{A \cap B} = \min(\mu_A, \mu_B)$$

(ii) $A \cap B = \{ (x_1, 0.1), (x_2, 0.4), (x_3, 0.5) \}$

(iii) $A^c = \{ (x_1, 0.8), (x_2, 0.5), (x_3, 0.4) \}$

$B^c = \{ (x_1, 0.9), (x_2, 0.6), (x_3, 0.5) \}$