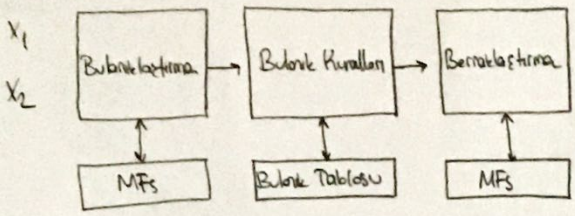
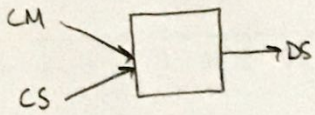
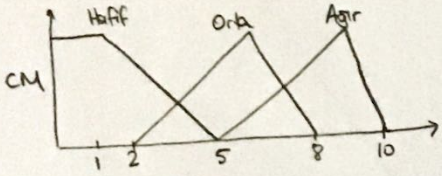
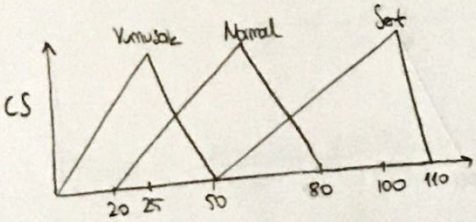
2. Mamdani

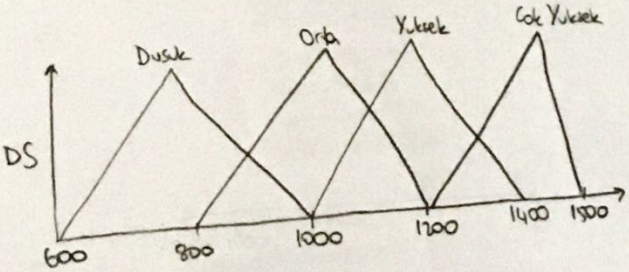


—Üyelik fonksiyonları bulanık kümeleri temsil eden yapılardır.

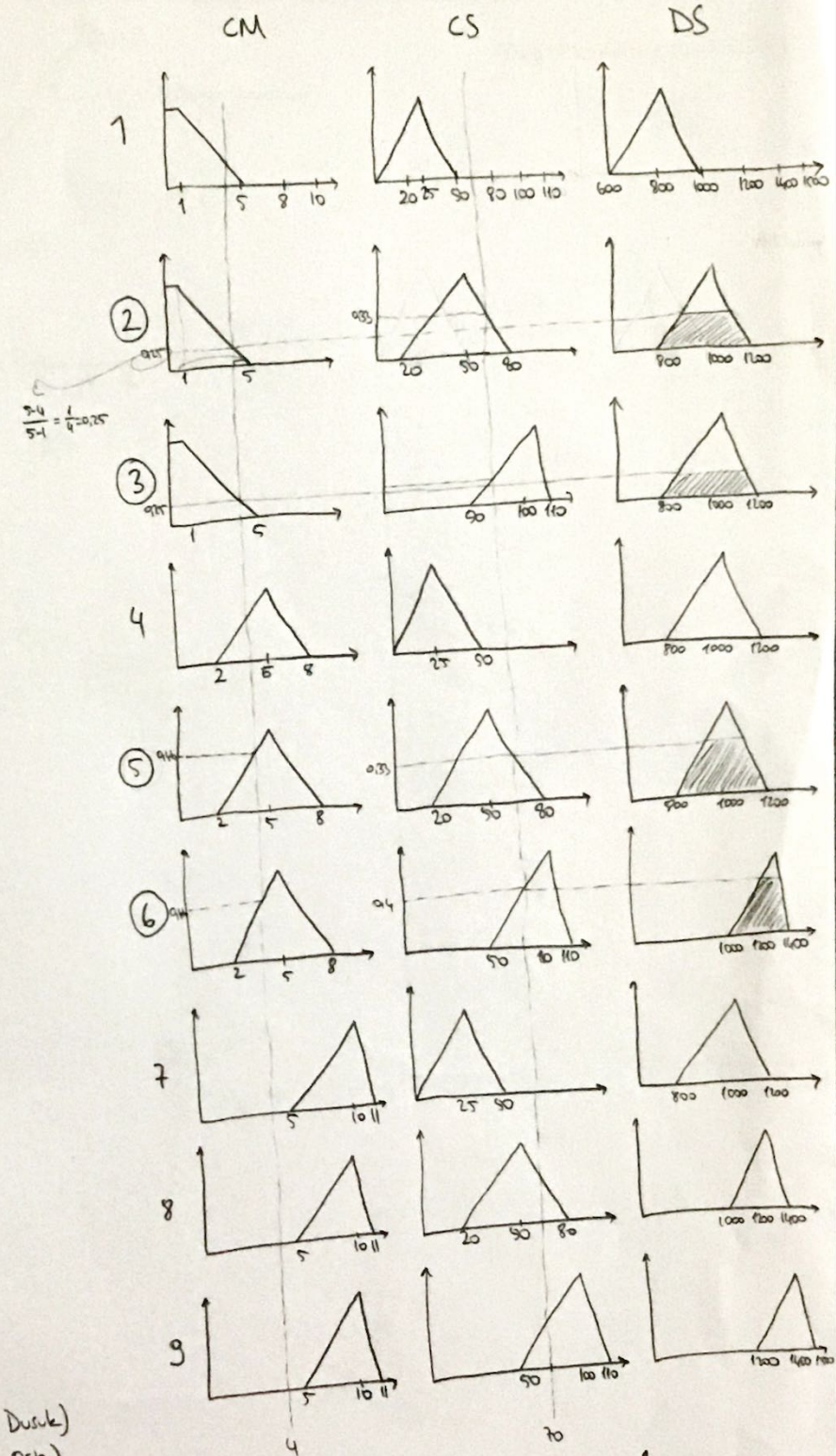




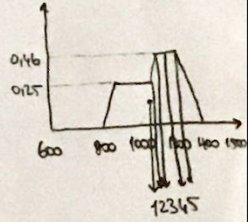




CS\CM	Hafif	Orta	Agır
Yumuşak	Dusuk	Orta	Orta
Normal	Orta	Orta	Yuksek
Sert	Orta	Yuksek	Cok Yuksek

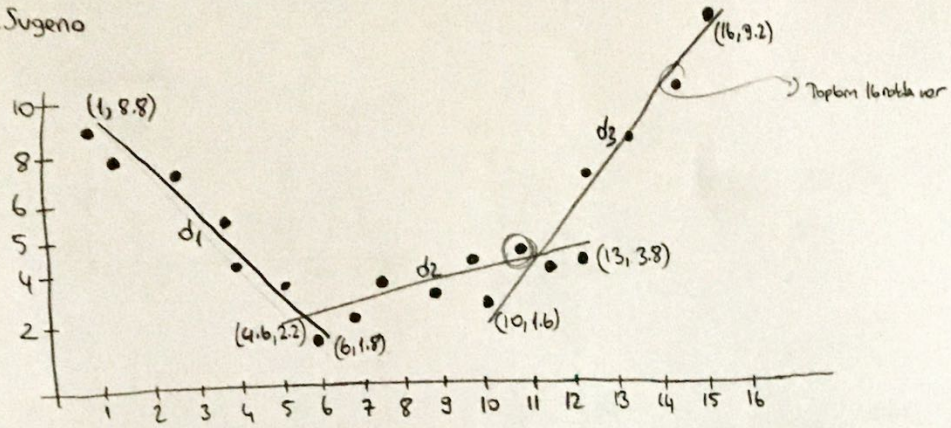


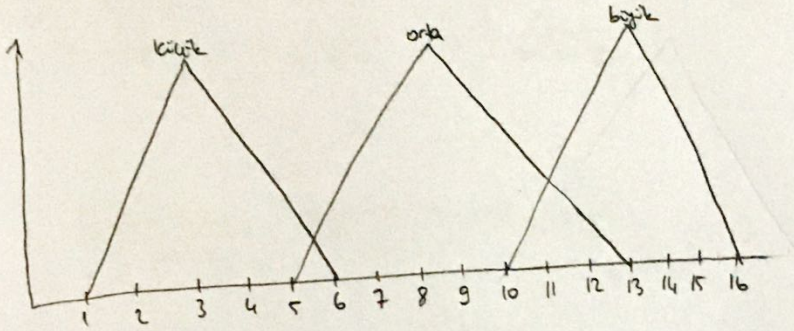
1- if (CM is Hafif) and (CS is Yumuşak) then (DS is Dusuk)
2- if (CM is Hafif) and (CS is Normal) then (DS is Orta)
3- if (CM is Hafif) and (CS is Sert) then (DS is Orta)
4- if (CM is Orta) and (CS is Yumuşak) then (DS is Orta)
5- if (CM is Orta) and (CS is Normal) then (DS is Orta)
6- if (CM is Orta) and (CS is Sert) then (DS is Yuksek)
7- if (CM is Agır) and (CS is Yumuşak) then (DS is Orta)
8- if (CM is Agır) and (CS is Normal) then (DS is Yuksek)
9- if (CM is Agır) and (CS is Sert) then (DS is Cok Yuksek)



1- Centroid (Geometrik Merkez)
2- Bisector
3- SOM (Maksimum en küçük)
4- MOM (Maksimum ortası)
5- LOM (Maksimum en büyük)

3. Sugeno





$d_1 \Rightarrow \quad \frac{6-1}{x-6} = \frac{1.8-8.8}{y-1.8}$

$\frac{5}{x-6} = \frac{-7}{y-1.8}$

$5y - 9 = -7x + 42$

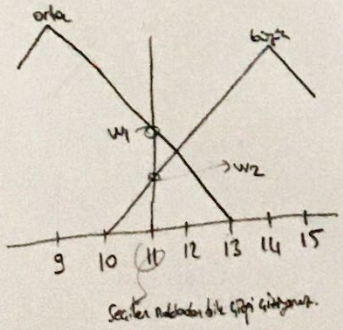
$5y = -7x + 51$

$y = -1.4x + 10.2$

$f_1(x) = -1.4x + 10.2$

$d_2 \Rightarrow \quad f_2(x) = 0.19x + 1.32$

$d_3 \Rightarrow \quad f_3(x) = 1.27x - 11.07$



$f_2(11) = 0.19(11) + 1.32 = 3.41$

$f_3(11) = 1.27(11) - 11.07 = 2.9$

$w_1 = \frac{13-11}{13-9} = 0.5$

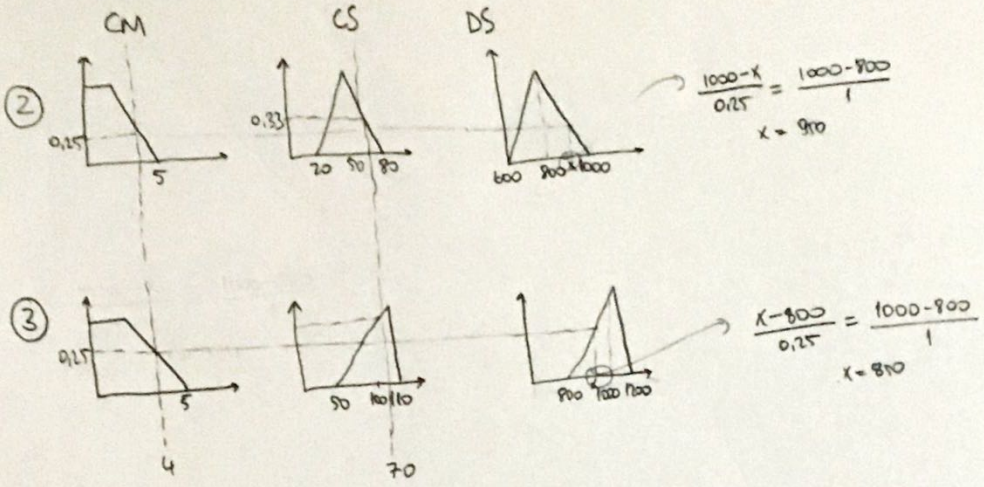
$w_2 = \frac{11-10}{13-10} = 0.33$

$= \frac{f_2(11).w_1 + f_3(11).w_2}{w_1 + w_2} = \frac{(3.4).(0.5) + (2.9)(0.33)}{0.5 + 0.33} = 3.20_{11}$

1) Geçtiği iki noktanın doğru denklemi

$\frac{x_2 - x_1}{x - x_2} = \frac{y_2 - y_1}{y - y_2}$

4. Tsukomato



$$= \frac{f_1 \cdot w_1 + f_2 \cdot w_2}{w_1 + w_2} = \frac{(900)(0,25) + (850)(0,25)}{0,25 + 0,25} = 875$$