Sheet03

Assignment 4

Degree: $D(x_i) = \sum_{j \in V} w_{i,j}$

$$D(A) = 3 \qquad D(E) = 3$$
$$D(B) = 3 \qquad D(F) = 3$$
$$D(C) = 4 \qquad D(G) = 4$$
$$D(D) = 2 \qquad D(H) = 2$$

Possible Cuts: $(Cut(C_1, C_2) = \sum_{i \in C_1} \sum_{j \in C_2} w_{i,j} \quad and \quad NormCur(C_1, C_2) = \frac{Cut(C_1, C_2)}{Vol(C_1)} + \frac{Cut(C_1, C_2)}{Vol(C_2)})$

C_1	C_2	$Cut(C_1, C_2)$	$Vol(C_1)$	$Vol(C_2)$	$NormCut(C_1, C_2)$
AD	BCFEGH	4	5	19	1,01052632
ADCF	BEGH	4	12	12	0,66666667
ABCDF	EGH	3	15	9	0,53333333
ABCDEFG	H	2	22	2	1,09090909
BEH	ACDFG	4	8	16	0,75
EGF	ABCDE	5	10	15	0,83333333
EFGH	ABCD	4	12	12	0,66666667
DF	ABCEGH	4	5	19	1,01052632

Minimal Cut:

$$\min Cut(C_1, C_2) = Cut(ABCDEFG, H) = 2$$

Minimal normalized Cut:

$$\min NormCut(C_3, C_4) = NormCut(ABCDF, EGH) = 0{,}533\,3333$$