## **Modularity of networks**

$$Q = \sum_{s=1}^{N_M} \left[ \frac{I_s}{L} - \left( \frac{d_s}{2L} \right)^2 \right]$$

	N <sub>M</sub> = 1	Q = 0
	$I_1 = 7$	
	$d_1 = 14$	
. 10.	L = 7	
	$N_M = 6$	Q = -0.17347
**	$I_1 = 0, I_2 = 0, I_3 = 0, I_4 = 0, I_5 = 0, I_6 = 0$	0.17011
<b>*</b>	$d_1 = 2, d_2 = 2, d_3 = 3, d_4 = 3, d_5 = 2, d_6 = 2$	
**		
	$L = 7$ $N_M = 2$	Q = 0.030612
<b>S5</b> 2	· · ·	Q = 0.030012
	$l_1 = 3, l_2 = 1$	
1	$d_1 = 9, d_2 = 5$	
C.	L=7	Q = 0.122449
\$1\$2	$N_M = 2$	Q = 0.122449
	$I_1 = 4, I_2 = 1$	
	$d_1 = 10, d_2 = 4$	
	L = 7	0 00554
. <u>\$.1</u>	$N_{\rm M}=2$	Q = -0.2551
	$I_1 = 2, I_2 = 0$	
	$d_1 = 9, d_2 = 5$	
······································	L=7	
	$N_M = 2$	Q = -0.16327
	$I_1 = 3, I_2 = 0$	
S1	$d_1 = 10, d_2 = 4$	
***************************************	L = 7	
S1	$N_M = 2$	Q = 0.030612
	$I_1 = 1, I_2 = 3$	
7.00	$d_1 = 5, d_2 = 9$	
$\sqrt{1.52}$	L = 7	
•••••		
•••• <b>\$</b> 2	$N_M = 2$	Q = -0.08163
Say	$I_1 = 2, I_2 = 1$	
	$d_1 = 8, d_2 = 6$	
	L=7	