Measure	Level	Graph type	Definition	Def nb	NetworkX command	Value
Nb of vertices	System	D, U	$n = \#V(G)$	??	`g.number_of_nodes()`	100
Nb of edges	System	U	$m = \frac{1}{2}\sum_{ij} \boldsymbol{A}_{ij}$	??	`g.number_of_edges()`	475
Nb of arcs	System	D	$a = \sum_{ij} \boldsymbol{A}_{ij}$	??	`g.number_of_edges()`	NA
Neighborhood	Vertex	U	$\mathcal{N}(v_i) := \{v_j \in V(G) \vert i \neq j, \exists e \in E(G) : e = \langle v_i, v_j \rangle\}$	??	`nx.all_neighbors(g, v)`	NA
Connectedness	Vertices	U	$d(v_i, v_j) \neq \infty$	??	`nx.has_path(g,` v_i`,`v_j`)`	NA
Connectedness	System	U	$d(v_i, v_j) \neq \infty \ \forall \ v_i, v_j \in V(G)$	??	`nx.is_connected(g)`	True
Distance	Vertices	U, D	length of the shortest path (v_i, v_j)	??	`nx.shortest_path(g,` v_i`,` v_j`)`	NA
Distance	Vertices	U, D	length of the shortest path (v_i, v_j)	??	`nx.shortest_path(g,` v_i`,` v_j`)`	NA
Diameter	System	U, D	$diam(G) = \max\{(d(v_i, v_j)\}_{i,j \in V(G)}$	??	`nx.shortest_path(g,` v_i`,` v_j`)`	4
Av path length	System	U, D	$\bar{d}(G) = \frac{1}{n}\sum_{v_i \in V(G)} \bar{d}(v_i).$	??	`nx.average_shortest_path_length(g)`	2.2
Char path length	System	U, D	$CPL(G) = median\{(d(v_i, v_j)\}_{i,j \in V(G)}$	??	NA	NA
Density	System	D	$\rho(G) = \frac{a}{n(n-1)}$	??	`nx.density(g)`	NA
Density	System	U	$\rho(G) = \frac{2m}{n(n-1)}$	??	`nx.density(g)`	0.096
Transitivity	System	U	$\tau = \frac{\sum_{ijk} a_{ij}a_{jk}a_{kj}}{\sum_{ijk} a_{ij}a_{jk}}$	??	`nx.transitivity(g)`	0.16
Clustering	Vertex	U	$cc(v_i) = \frac{\sum_{ijk} a_{ij}a_{jk}a_{kj}}{\delta(v_i)(\delta(v_i)-1)}$	??	`nx.clustering(g,` v_i`)`	NA
Clustering	System	U, D	$CC(G) = \frac{1}{n}\sum_{v_i \in V(G)} cc(v_i)$	??	`nx.average_clustering(g)`	0.218
Degree	Vertex	U	$\delta(v_i) = \sum_{j=1}^{n} a_{ij}$	??	`g.degree(`v_i`)`	NA
In-degree	Vertex	D	$\delta^{in}(v_i) = \sum_{j}^{n} a_{ji}$	??	`g.in_degree(`v_i`)`	NA
Out-degree	Vertex	D	$\delta^{out}(v_i) = \sum_{j}^{n} a_{ij}$	??	`g.out_degree(`v_i`)`	NA
Av degree	System	U	$\bar{\delta}(G) = \frac{2m}{n}$	NA	`np.mean(list(g.degree().values()))`	
Av in/out-degree	System	D	$\bar{\delta}(G) = \frac{2m}{n}$	NA	`np.mean(list(g.out_degree().values()))`	NA

Table 1: The network measures discussed so far for the example graph in figure **??** In the definitions it is assumed that the graph in connected and unweighted. Also, $a_{ij} \in \boldsymbol{A} = 1$ if $\langle v_i, v_j \rangle$ exists and zero otherwise. The NetworkX code assumes the graph is named `g`. The degree distribution and cumulative degree distribution are shown in figure **??**.