Graph theory  
1. Network centrality eg in social networks - most connected eg

* 1. Degree centrality- sum of each nodes connection. Best in complete network – see well connected people eg networks for star wars. They don’t work well for ego networks. Who holds the most information. Not best foe literature also. Shouldn’t be weighted or directed, but can get weighted degree.for directed graphs you calculate in degree.
  2. Betweenness - how many shortest paths across networks lead through each node. you are between other nodes.
     1. Find the mot important for holding the network together
     2. Which have the most controlover the control network because information pass through them.
  3. Closeness: how close is the node to the rest of the network (low indicates centrality other two needs high)
     1. Find key distribution points
     2. Find broadcasters that have best access to thenetwork. Need to evaluate for directed graphs
  4. Egen vector: measures nodes connection to other highly connected nodes ( the best) -not important how many you know but also important who you know
     1. Eg google page rank great measure all around eg books and citations eg the book citation numbers are important but its also important whether its connected to other highly cited books.

1. Network Density – describes the network as a whole. The potential connections that exists network-level-measurement = number of edges/number of possible edges
   1. A Dense network like a family reunion – everybodyknows everybody. A loose network is like riding a bus together.
2. Network Modularity – identifies clusters or modularity in the network. Eg twitter event hashtags.doesnt work well with weighted and directed graphs.