1. What is Social Network Analysis?
    a. Social Network Analysis (SNA) is the process of investigating social structures through the use of network and graph theories. It helps us with entity resolution, behaviour analysis and link prediction.
2. What is Egocentric Social Network Analysis?
    a. Focus is on the individual and their connections
3. What is Sociocentric social network analysis?
    a. Looking at patterns across the entire network
4. Which graph property tells us the number of subreddits an subreddit is linked to?
    a. Neighbour Count
5. Which graph property tells us the number of times a subreddit has been linked to or linked another subreddit?
    a. Transaction Count
6. What is Eccentricity?
    a. A measure of how central a node is in the network – the minimum distance to the furthest node.
7. What is meant by Graph Radius?
    a. The minimum eccentricity across all nodes.
8. What is meant by Graph Diameter?
    a. The maximum eccentricity across all nodes.
9. How many nodes have the highest Eccentricity? Where are they in the network?
    a. 20, on the outskirts.
    b. Run in Analytic View – Metrics and then look at Histogram
10. How many nodes have the lowest Eccentricity? Where are they in the network?
    a. 10, in the middle.
    b. Run in Analytic View – Metrics and then look at Histogram
11. What is the Radius of the graph?
    a. 3
    b. Run in Analytic View – Global and then look at Attribute Editor
12. What is the Diameter of the graph?
    a. 5
    b. Run in Analytic View – Global and then look at Attribute Editor
13. What is the Average Path Distance of the graph?
    a. 2.64
    b. Run in Analytic View – Global and then look at Attribute Editor
14. What is a component?
    a. A completely connected group of nodes in a graph.
15. What is Connectivity Degree?
    a. A measure of how many components a node is holding together.
16. Which nodes have a Connectivity Degree greater than 1? Who is holding the graph together?
    a. Gavroche and Valjean
    b. Run in Analytic View – Metrics and then look at Histogram
17. How many components are on the graph if they are removed?
    a. 4, with 5 singletons
    b. Select and delete, then Count Components from Analytic View - Global
18. What is Centrality?
    a. A measure of how important a node is.

19. What is Degree Centrality?
    a. A measure of importance based on the number of adjacent neighbours/transactions
20. Which node has the highest Degree Centrality?
    a. Valjean
    b. Run in Analytic View – Centrality and then look at Histogram
21. What would the In-Degree Centrality of a Source?
    a. 0
22. What would be the Out-Degree Centrality of a Sink?
    a. 0
23. What is PageRank Centrality?
    a. A measure of how influential a node in a network is.
24. Which node has the highest PageRank Centrality?
    a. Valjean
    b. Run in Analytic View – Centrality and then look at Histogram
25. What is Betweenness Centrality?
    a. A measure of importance based on the number of shortest paths a node falls on
26. Which node has the highest Betweenness Centrality?
    a. Valjean
    b. Run in Analytic View – Centrality and then look at Histogram
27. What is Closeness Centrality?
    a. A measure of importance based on the average hop distance to all other nodes.
28. How does this node's betweenness score compare with their Connectivity Degree?
    a. High betweenness centrality but connectivity degree of 1.
    b. There might be other decent answers to this one – Use Scatter Plot View
29. Which node has the highest Closeness Centrality?
    a. Thernadier
    b. Run in Analytic View – Centrality and then look at Histogram
30. How does this node's closeness score compare with their Eccentricity?
    a. Highest closeness and highest eccentricity
    b. There might be other decent answers to this one – Use Scatter Plot View

Other Analytics:

31. What is Multiplexity?
    a. The multiplexity of a link is the number of types of transactions observed in that link. In Social Network Analysis, higher multiplexity indicates a stronger relationship.
32. What is Reciprocity?
    a. The ratio of reciprocity of a link is the ratio of outgoing to incoming transactions observed in that link. In Social Network Analysis it is a measure of whether a relationship is one-sided or two-sided, with two-sided relationships typically being stronger.
33. What is Weight?
    a. The weight of a link is the number of transactions observed in that link. The more observed transactions, the stronger the relationship.
34. What is a Clustering Coefficient?
    a. In graph theory, a clustering coefficient is a measure of the extent to which nodes in a graph tend to cluster together and a clique is a group of nodes whereby each pair of nodes shares a connection (every possible link exists). A node's neighbourhood is

the induced subgraph of a node and its neighbours (also known as a 1.5 hop network or an ego network).

35. What is the Local Clustering Coefficient?
    a. The local clustering coefficient of a node is the measure of how close a node's neighbourhood is to being a clique. It is the ratio of the number of relationships that exist in the neighbourhood compared to the number of relationships that could possibly exist. It is a measure of a node's interconnectedness.
36. What is the Global Clustering Coefficient?
    a. The global clustering coefficient is the number of closed triplets (or 3 x triangles) over the total number of triplets (both open and closed). It provides an overall indication of the clustering in the network.
37. What is Eigenvector Centrality?
    a. Eigenvector centrality is a measure of a node's importance determined by the number of its neighbours, as well as the average degree of its neighbours. A variation of degree centrality that is less biased towards high degree nodes.
38. What is Katz Centrality?
    a. Katz centrality computes the influence of a node by calculating the number of the neighbours, and other nodes on the graph that connect to the node through these immediate neighbours. Connections made with distant neighbours are penalised by an attenuation factor. It is a variation of eigenvector centrality that incorporates the direction of transactions.
39. What is HITS Centrality?
    a. Hyperlink-Induced Topic Search (HITS) centrality is a link analysis algorithm that categorises nodes into hubs or authorities.
40. What is a hub?
    a. A hub is a node with incoming transactions from many neighbours
41. What is an authority?
    a. An authority is a node with incoming transactions from many different hubs. Authorities hold influential positions in a network.