For all queries, label all output columns appropriately.

1. Write a single SQL query to find the name of all locations and the number of places that can be reached from there. Make sure to include all locations with no destinations. Sort the results by the number of destinations. The query must be valid under standard SQL.
2. Write a single SQL query to find the logins of players and the names of locations such that the player has a hero in all possible destination from that location. You can use any approach to solve the problem.
3. Write a single SQL statement to move all heroes named Bangsplat to the Great Ocean. You can assume the Great Ocean exists as a location.

4. Write a single SQL query to find all travel with distance greater than the average distance. Return the name of the source, name of the destination and the distance. Order by distance descending.
5. The Great Sea has become too annoying. Write ALL of the SQL statements needed to remove it from the tables used for the exam (you only have to modify those tables). Indicate the order in which the SQL statements should be executed. Do not make assumptions other than what is in the handout.
6. The men-at-arms part of LampQuest is going to be revised. Each man-at-arms will now have a level that cannot be higher than his Hero’s level. Furthermore, a man-at-arms is either a Warrior or a Defender (but not both). A Warrior will have a power that is equal to the level of the Hero plus his level. A Defender will have an endurance that is equal to the level of the Hero plus his level. Man-at-arms cannot die, but are eliminated from the database if their Hero dies.

(a) Draw an ER diagram representing men-at-arms. If you need an entity representing anything currently in the game, you can ignore the attributes already existing. Do not forget cardinality constraints.
(b) Describe how the level constraint would be enforced for men-at-arms. Actual SQL is not required, but you should be clear about the statement you would use.

(c) Describe how the elimination constraint would be enforced for men-at-arms. Actual SQL is not required, but you should be clear about the statement you would use.

7. In JDBC, what does it mean when the next method of the ResultSet class returns false?

8. When drawing an ER diagram, what should you do if you want to have a relationship between two relationships?

9. What is a subquery in the FROM clause commonly called?