**Topic 01  
Kingdom of Westeros**

Given the following areas and distance,in km, between them.  
\*The numbers in brackets specifiy the population size of the area.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | The North | The Mountain | The Vale | The Rock | The Stormlands | The Reach |
| The North (300) | 0 |  |  |  |  |  |
| The Mountain (600) | 100 | 0 |  |  |  |  |
| The Vale (150) | 150 | 50 | 0 |  |  |  |
| The Rock (1024) | 220 | 120 | 606 | 0 |  |  |
| The Stormlands (250) | 240 | 240 | 250 | 203 | 0 |  |
| The Reach (12) | 250 | 150 | 130 | 303 | 105 | 0 |

In addition to the above specification, there’s the outside world beyond the wall where the whitewalkers live.

* Choose an appropriate network address and create subnets to assign to each of the places with the least amount of waste.
* Assign IP addresses to all the devices and interfaces.
* The Whitewalkers (10000) have a web server to spread their propaganda and recruit whitewalkers.
* Establish connections among all the networks with the shortest route possible.
  + Must have at least one floating route.
  + Must have a backup system to handle missing routing entries.
  + Configure half of the network to be routed dynamically.
* Showing 2 end devices per network is good enough to represent the whole population.
  + The rock has laptops and printers
* You need to be able to ping each other after all the setups are complete.

**Deliverables**

* The network mentioned above should be implemented in packet tracer, with necessary devices and full configuration.
* After completion you should be able to test the conditions imposed.
* As hardcopies, you will have to submit the followings:
  + Network topology diagram with proper labels
  + The configurations of all the routers that you have implemented.
  + VLSM/Network address table.
  + IP address table