Using Netkit, implement the network depicted in the figure and described below (you can use the following items as a checklist).

- Remember to set up a default route where required.
- No routers announce the default route 0.0.0.0/0 or any IPv6 subnets.
- Routing within AS100 is implemented using OSPF. All the interfaces belong to area 0.0.0.0, and in particular the interfaces of as100r1 and as100r2 are assigned the indicated costs.
- AS100 is a transit AS. Therefore, as100r1 and as100r2 redistribute in OSPF eBGP only, as well as the addresses of loopback interfaces.
- All peering LANs are announced in BGP: AS2, AS20, AS30, AS100, and AS200 also announce their own subnets.
- AS100’ s border routers establish an iBGP peering using loopback interfaces (use update-source IPADDRESS).
- AS20 is a customer of AS1 and AS100. As such, it forbids transit traffic.
- AS2 is a customer of AS100 and AS30. As such, it forbids transit traffic and prefers using link R for outgoing traffic.

- web30-1, web200-1, and web200-2 are web servers running Apache which serve a default page, different for each server.
- L4SW is a Layer-4 Web switch with VIP 200.0.0.2, which implements a round-robin load balancing policy using the following configuration:
  - iptables -t nat -A PREROUTING -d 200.0.0.2 -m statistic --mode nth --every 2 --jump DNAT --to-destination 200.0.0.0
- REDISTRIBUTING EBGP IN AN IGP
  - redistribute bgp route-map route-map-name
  - route-map route-map-name permit 10
  - match ip next-hop prefix-list prefix-list-name
  - ip prefix-list prefix-list-name permit next-hop 32

- ROUTING WITHIN SUBNETS
  - Remember to enable IPv6 forwarding on the nodes that act as IPv6 routers.
  - IPv6 routing is implemented using static routes.
  - An IPv6-in-IPv4 tunnel is established between as10r1’s eth0 interface and as2r1’s eth0 interface.