FHRPs

First Hop Redundancy Protocols: to protect default gateway used on a subnetwork by allowing two or more routers to provide backup for default gateway address and take it over in case of its failure within a few seconds.
The routers share a VIP and a virtual mac address which is configured as en hosts default gateway, routers negotiate their roles through multicast messages.
Gratuitous ARP replies are ARP replies sent without being requested and are broadcast ed to FFFF.FFFF.FFFF.
FHRPs are non-preemptive where the current active router will not automatically give up its role even if the former active router returns by default.

HSRP: Hot Standby Router Protocol → Cisco proprietary, an active and a standby routers are elected, two versions, v2 adds IPV6 support and increases the number of groups that can be configured.
In multiple subnets and VLANs a different active router in each subnet/VLAN can be configured to load-balance.

VRRP: Virtual Router Redundancy Protocol → open standard, a master and backup routers are elected, can load balance between different subnets.

GLBP: Gateway Load Balancing Protocol → Cisco proprietary, load balances among multiple routers within a single subnet.
An AVG → Active Virtual Gateway is selected, up to 4 AVFS (Active Virtual Forwarders) are assigned by the AVG (AVG can be an AVF too), each AVF acts as the default gateway for a portion of the hosts in the subnet.

Command: standby version <version> to change HSRP version v1 and v2 are not compatible.
Command: standby <group number> ip <vip> to activate HSRP with VIP. (group number has to match between routers).
Command: standby <group number> priority <priority> to determine active router (Highest priority then Highest IP address).
Default priority is 100.
Command: standby <group number> preempt to enable preemption (only configured on main active router).
CAN BE USED ON LAYER 3 SWITCHES.