

VLSM (Variable-Length Subnet Mask)—Using more than one subnet mask *in the same classful network*. No special configuration is needed by Cisco to support it; just enter ip addresses and masks on interfaces and it'll work.

CIDR (Classless Inter-Domain Routing)—RIPv2, EIGRP, and OSPF are *classless* routing protocols (unlike RIPv1). Specifically, they:

- Send masks in updates
- Support VLSM
- Support manual route summarization

Question Types may include:

- Finding subnet overlaps—calculate address ranges for each subnet by adding the magic number (256-mask) to the starting address. Then, see if they overlap.
- Designing a subnet plan—Since all subnets must begin on a multiple of their own size, do the big ones first. Tetris.
- Finding the numerically lowest subnet of a given size that can fit into an existing VLSM design that may not have been tightly packed by following the suggestion in the previous bullet point. This is really just a variation on the first bullet point. First, figure out your magic number, giving you both the size of your subnet and what multiple it must land on. Then, in a multiple-choice environment, check each option to make sure that it is a correct multiple and doesn't overlap the existing.