8.1.2.11 Video - Creating Four Equal-sized Subnets (2 min)

In this situation, we're tasked to create four equal-sized subnets starting from the network address 192.168.1.0 /24. If you look at the diagram, the network administrator actually only needs to create three subnetworks. However, this will not be possible because subnets are created in powers of two. So we have the options of creating two subnets, four subnets, eight subnets, and so on, going up in powers of two. I'll show you what I mean. First I'll write out the subnet mask in binary, so we'll be borrowing bits here, from the host portion. If we borrow two bits from the host portion of the subnet mask, we now have two subnetwork bits. And two to the second power is four, so that will create four subnets. The last one in our subnet mask is in the 64's place, so the subnets will go up by 64. In other words, the first subnetwork will be 0 /26 since we've added two subnet bits and we now have 26 ones. The next subnetwork will be 192.168.1.64 /26. And then 192.168.1.128 /26, notice that they're going up by 64. And the last one, 192.168.1.192 /26. We now have four equal-sized subnets and we can use any of these subnets to accommodate these three networks in the diagram.