**Test 1 Study Helps**

This test covers: Book 1: ch 1-10, 12,13 Book 2: ch 4

Most of the projects that we did were designed to reinforce concepts from these chapters. If you struggled on any of those projects you ought to go back and do them again as a review exercise.

At the beginning of each chapter there is a set of practice problems. It would be a good idea to see if you can answer those. The answers should be found at the back of your book.

Here is a general list of things that you ought to know. I’m sure that I haven’t included everything, but it is a start.

- TCP/IP and OSI models
- Ethernet
  - 10base2
  - 10base5
  - hubs
  - cabling and standards
  - should know pinout orders
  - other Ethernet standards
  - switches
  - duplex
- WANs
  - cabling
  - clock rates, synchronization, DCE, DTE
  - Frame Relay
- IP
  - addresses (classes a,b,c)
  - routing
  - how we deliver on a local network
  - how we deliver on a remote network
  - *subnetting*
  - arp, dns, dhcp
- TCP/UDP
  - port numbers
  - flow control
  - connection vs connectionless
  - 3 way handshake
- Switches
  - How switches learn mac addresses
  - Flooding frames
  - avoid loops
  - collision and broadcast domains
- Switch troubleshooting
  - cdp
  - interface status
  - speed and duplex issues
- Other
  - different privilege levels (0-15)
  - what is enable mode
  - other modes

**Cisco IOS commands (not comprehensive)**

- `sh ip int br`
- `sh run`
- `sh start`
- `sh controllers`
- `conf t`
- `enable`
- How to add a new user
- How to change your IP address
- Set default gateway
- Set banner
Those were a few that readily came to mind, but any commands that you did for your projects are fair game.