Investigation 1: How do you install Fedora?
Answer:

One of the method is boot from the installation DVD and answer all the installation questions and/or options.

Investigation 2: How many files packages and files are installed on the system?

3. `grep Installing /root/install.log | wc -l` <-- gives total number of file packages installed during the OS installation process.

4. `rpm -qa | wc -l` <-- gives total number of file packages installed up to the point this command was executed.
This number may be greater than the number obtained in step 3 if you use the "rpm" command or the "yum" command to add additional packages after the OS installation process. This number may be smaller than the number obtained in step 3 if you use the "rpm" command or the "yum" command to remove file packages after the OS installation process.

9. `rpm -qal | wc -l` <-- gives total number of files installed by all the software packages in your system.

14. To copy the installation log file /root/install.log and the file ps.lst to your matrix account, use the following command (assume your learn account name is jsmith101):

(a) to a USB memory key (assume usb device name /dev/sdb1 and mount to /media/usb):
```
cp /root/install.log /media/usb
cp /root/ps.lst /media/usb
```

(b) to your matrix account (assume account name jsmith101, the files will be copied to the user's home directory on matrix, i.e. /home/jsmith101):
```
scp /root/install.log jsmith101@matrix.senecac.on.ca:
scp /root/ps.lst jsmith101@matrix.senecac.on.ca:
```

Investigation 3: What is runlevel?

Runlevel refers to the state of a working computer when a group of specific software are running

The output of the command "`grep initdefault /etc/inittab`":

```
#   0 - halt (Do NOT set initdefault to this)
#   6 - reboot (Do NOT set initdefault to this)
id:5:initdefault:
```

The second field (on the last line) indicates that the system by default should boot to runlevel 5.
The services listed in /etc/rc.d/rc5.d should be activated when the system enters runlevel 5.

The Fedora Installation program (anaconda) by default sets your Fedora to obtained its network configuration automatically from a DHCP server. You can use the "ifconfig", "route", "netstat -rn" and the "nslookup" commands to query your Fedora's network settings.

The ifconfig (`/sbin/ifconfig`) command gives you all the active network device names, its hardware address, IP (IPv4 and IPv6) address(es), network mask and broadcast address etc.

The "route -n" (`/sbin/route`) command and the "`netstat -rn`" command give you the routing table which may contain the default gateway, if there is any, for your machine.

The "nslookup" can be used as an interactive resolver to send queries to domain name server to resolve full qualify domain name to IP address. While it is running in interactive mode, you can type the "server" command to display the name server that it is using. The IP address of the name server used by a resolver running on a Linux machine is usually stored in the file **/etc/resolv.conf.**

You can find the **MAC address** and the IP address from the output of the **ifconfig** command.
You can find the **default route (gateway)** from the output of "route" or "netstat -r"
You can find the **DNS nameserver** for your computer either by running the nslookup command in interactive mode and type the server command, or check the contents of the file /etc/resolv.conf

Answers for the session "Preparing for the Quizzes"

1. Can be found by running the command: rpm -qa | wc -l
2. Can be found by running the command: rpm -qal | wc -l
3. Can be found by running the command : mount | wc -l
4. Can be found by running the command: grep -v ^learnid /etc/passwd | wc -l
5. Can be found by running the command as root: id learnid
   or simply "id" if login with your learnid
6. /home/learnid
7. /root
8. Can be found by running the command: hostname
9. use the command: ifconfig (can look for it) or
   use the command pipe line: ifconfig | grep eth | awk '{print $5}'
   (you may get more then one MAC address if your system has more than one NIC)
10. /etc/inittab