

PRINT Name: _____

Test Version: 389

One-Answer Multiple Choice

183 Questions – 30 of 30%

- ☞ Read **all** the words of these instructions and **both** sides (back and front) of all pages.
 - ☞ Put your name on this Question Sheet. You may write or draw on this Question Sheet.
 - ☞ Use your full, unabbreviated name on the mark-sense form. Do not abbreviate your name.
 - ☞ Put the three-digit **Test Version** above into **NO. OF QUESTIONS** and **NO. OF STUDENTS**
 - ☞ Fill in the bubbles with pencil only, no pen. Enter your NAME, Test Version, and answers.
 - ☞ Manage your time. Answer questions you know, first. One Answer per question.
-

1. What is the output of this command line in an empty directory: `touch .a .b .c ; echo [.]*`
 - a. no output
 - b. `.a .b .c`
 - c. an error message from `echo` saying `[.]*` does not exist
 - d. `. .. .a .b .c`
 - e. `[.]*`
2. To bring a background shell job into the foreground, type:
 - a. `kill %1`
 - b. `[Ctrl-Z]`
 - c. `fg`
 - d. `bg`
 - e. `[Ctrl-D]`
3. User `bob` is in groups `bg1` and `bg2`. User `pat` is in group `pgg`.
`d--x-----x 2 pat pgg 60 Jan 1 1:00 foo`
`-r-xrwx-w- 1 bob bg1 0 Jan 1 1:00 foo/bar`
 - a. `pat` can rename the file
 - b. `bob` can create a new file in the directory
 - c. `bob` can access and write on the file
 - d. `bob` can list names in the directory
 - e. `pat` can access and write on the file
4. To change your own account password, use this exact command line:
 - a. `$ passwd cst8207`
 - b. `$ passwd idallen-ubuntu`
 - c. `$ passwd cst8207.idallen.ca`
 - d. `$ passwd 10.50.254.150`
 - e. `$ passwd`
5. User `bob` is in groups `bg1` and `bg2`. User `pat` is in group `pgg`.
`dr-xrwxrw- 2 pat pgg 60 Jan 1 1:00 foo`
`--w----r-x 1 bob bg1 0 Jan 1 1:00 foo/bar`
 - a. `bob` can create a new file in the directory
 - b. `pat` can access and write on the file
 - c. `pat` can rename the file
 - d. `bob` can access and write on the file
 - e. `bob` can list names in the directory
6. Which is the second DOS *logical* partition?
 - a. `/dev/sd6a`
 - b. `/dev/sdb1`
 - c. `/dev/sda6`
 - d. `/dev/sd2a`
 - e. `/dev/sda2`

7. Which command line creates a directory into which anyone can put a file, but in which nobody can see the names of the files that are there?
- `mkdir protected ; chmod 222 protected`
 - `mkdir protected ; cd protected ; chmod ugo=w .`
 - `mkdir protected ; chmod 333 .`
 - `mkdir protected ; cd protected ; chmod ugo-rw .`
 - `mkdir protected ; chmod 333 protected`
8. A Unix/Linux "tarball" is:
- a single compressed file containing one uncompressed file
 - a single-file that contains individual compressed files
 - a multi-file directory containing individual compressed files
 - a multi-file directory containing individual uncompressed files
 - a single-file that contains individual uncompressed files
9. Give the GRUB device name for the second partition of the third disk:
- `(sd2,3)`
 - `(hd2,1)`
 - `(sdc,2)`
 - `(hd2,3)`
 - `(hd1,2)`
10. What command changes a user's password?
- `passwd`
 - `password`
 - `chsh`
 - `chpasswd`
 - `mkpasswd`
11. The password `:x:` in `/etc/passwd` means:
- the password is locked
 - the unencrypted password is stored in the group file
 - the encrypted password is stored in the shadow file
 - the account is locked
 - the encrypted password is `"x"`
12. Pick the correct order of operations:
- `mount, fdisk, mkfs`
 - `fdisk, mount, mkfs`
 - `fdisk, mkfs, mount`
 - `mount, mkfs, fdisk`
 - `mkfs, fdisk, mount`
13. User `bob` is in groups `bg1` and `bg2`. User `pat` is in group `pgg`.
- ```
dr---wx--- 2 pat bg2 60 Jan 1 1:00 foo
-rw-rw-r-x 1 pat ted 0 Jan 1 1:00 foo/bar
```
- `bob` can rename the file
  - `pat` can create a new file in the directory
  - `bob` can list names in the directory
  - `bob` can access and write on the file
  - `pat` can rename the file
14. Which of these statements is true?
- If you give me write permission on a file owned by you, I can then use `chmod` to change its permissions.
  - To make a hard link to file `"foo"` named `"bar"`, file `"foo"` must exist.
  - You only need `"r--"` permission on directory `"foo"` for `"ls -l foo"` to work.
  - You can make a hard link to a directory.
  - The `"ln"` command takes two arguments, so the maximum number of hard links a file can have is two.

15. What command sets group administrator users?
- `modgroup`
  - `usermod`
  - `groupedit`
  - `passwd`
  - `gpasswd`
16. Which command line would show the inode number of a file?
- `find -i file`
  - `cat -l file`
  - `ls -i file`
  - `ls -l file`
  - `cat -i file`
17. What is contained in the `/etc/fstab` file?
- a list of file systems to mount when booting the system
  - a list of file system tables used to identify partition types
  - a list of file system tables used by the `adduser` command
  - a list of currently mounted file systems
  - a list of file system tables used by the `usermod` command
18. What command line modifies and moves (in one command line) the home directory `foo` to `bar` for the existing user `bob`?
- `usermod -m -d /home/foo /home/bar`
  - `usermod -dm /home/bar bob`
  - `usermod -d -m /home/bob bar`
  - `usermod -d -m /home/bar bob`
  - `usermod -m -d /home/bar bob`
19. In an empty directory, what is output on your screen by:
- ```
mkdir -p a/b/c 1/2/3 ; mv a/b 1/2 ; find . -name c
```
- `./1/a/b`
 - `./1/2/a/b`
 - `./1/2/b/c`
 - `./1/2/c`
 - `./a/b/c`
20. When going from Run Level 2 to Run Level 5, the system:
- goes directly to Run Level 5
 - initializes to Run Level 1, then goes to Level 5
 - initializes to Run Level 0, then goes to Level 5
 - goes through Run Levels 2, 3, and 4 before Level 5
 - goes through Run Levels 3 and 4 before Level 5
21. On a disk with eight partitions, give the correct partition names after you delete partition `sda2`:
- `sda1 sda2 sda3 sda4 sda5 sda6 sda7`
 - `sda1 sda2 sda3 sda4 sda5 sda7 sda8`
 - `sda1 sda2 sda3 sda4 sda6 sda7 sda8`
 - `sda1 sda2 sda3 sda4 sda5 sda6`
 - `sda1 sda3 sda4 sda5 sda6 sda7 sda8`
22. The `-v` option to the `grep` command does what?
- selects lines that do not contain unprintable characters
 - turns on the translation of unprintable characters
 - turns off the translation of unprintable characters
 - selects lines that do not contain a match for the supplied pattern
 - prints the version number of the `grep` command

23. To list your personal crontab, type:
- `cat crontab`
 - `/etc/crontab`
 - `/var/log/crontab`
 - `atq`
 - `crontab -l`
24. On a disk with eight partitions, give the correct partition names after you delete partition `sda5`:
- `sda1 sda2 sda3 sda4 sda5 sda6 sda8`
 - `sda1 sda2 sda3 sda4 sda5 sda7 sda8`
 - `sda1 sda2 sda3 sda4 sda5 sda6 sda7`
 - `sda1 sda2 sda3 sda4 sda6 sda7 sda8`
 - `sda1 sda2 sda3 sda4 sda5 sda6`
25. If user `pat` runs this command, who owns the new files `foo` and `bar`: `$ sudo touch foo >bar`
- `pat` and `root`
 - `pat` and `pat`
 - `foo` and `bar`
 - `root` and `pat`
 - `root` and `root`
26. User `bob` is in groups `bg1` and `bg2`. User `pat` is in group `pgr`.
- ```
dr-x---wx 2 pat ted 60 Jan 1 1:00 foo
-r-xr-xrwx 1 pat bg1 0 Jan 1 1:00 foo/bar
```
- `bob` can list names in the directory
  - `bob` can access and write on the file
  - `pat` can access and write on the file
  - `bob` can create a new file in the directory
  - `pat` can rename the file
27. User `bob` is in groups `bg1` and `bg2`. User `pat` is in group `pgr`.
- ```
d--xr---x 2 bob ted 60 Jan 1 1:00 foo
-r-x-w-rwx 1 pat bg2 0 Jan 1 1:00 foo/bar
```
- `bob` can access and write on the file
 - `bob` can list names in the directory
 - `pat` can access and write on the file
 - `pat` can rename the file
 - `bob` can create a new file in the directory
28. What command will show the type of file system inside an unmounted *partition* ?
- `fdisk -s partition`
 - `mount | grep 'partition'`
 - `fdisk -l partition`
 - `file partition`
 - `file -s partition`
29. What command line would create a file system on the partition?
- `mount partition`
 - `mkswap partition`
 - `fsck partition`
 - `fdisk partition`
 - `mkfs partition`
30. Given the following, can user `bird` in group `sesame` append to `./foo`?
- ```
dr-xr-xr-x 2 root sesame 4096 Oct 7 14:00 .
-r-xrwxrwx 1 bird sesame 123 Oct 4 14:05 foo
```
- No, because `bird` has no write permission on the directory
  - No, because the directory is not accessible to `bird`
  - Yes; permissions don't apply because `bird` owns `foo`
  - No, because `bird` has no write permissions on `foo`
  - No, because execute permissions are not set for `bird` on `foo`

31. What command displays the kernel ring buffer of log messages:
- `psmine`
  - `ps lxww`
  - `dmesg`
  - `crontab`
  - `showall`
32. Which command line below does not show any lines from inside the file `bat`?
- `more bat`
  - `ls bat`
  - `tail bat`
  - `head bat`
  - `less bat`
33. User `bob` is in groups `bg1` and `bg2`. User `pat` is in group `pgg`.
- ```
d-w---xr-x 2 pat ted 60 Jan 1 1:00 foo
-rwxr-xrwx 1 pat bg2 0 Jan 1 1:00 foo/bar
```
- `pat` can access and write on the file
 - `bob` can rename the file
 - `bob` can list names in the directory
 - `bob` can create a new file in the directory
 - `bob` can access and write on the file
34. Given the following, can user `bird` in group `sesame` append to `./foo`?
- ```
dr-xr--r-x 2 root sesame 4096 Oct 7 14:00 .
-rw-rw-r-- 1 bird sesame 123 Oct 4 14:05 foo
```
- No, because `bird` has no write permission on the directory
  - No, because execute permissions are not set for `bird` on `foo`
  - Yes, because `bird` has write permissions on `foo`
  - No, because the directory is not accessible to `bird`
  - Yes; permissions don't apply because `bird` owns `foo`
35. Given the following, can user `bird` in group `sesame` append to `foobar`?
- ```
drwx--xrw 2 root sesame 4096 Oct 7 14:00 .
-rw----- 1 bird sesame 1024 Oct 4 14:05 foobar
```
- No, because the directory is not accessible to `bird`
 - Yes, because `bird` has write permissions on `foobar`
 - No, because execute permissions are not set for `bird` on `foobar`
 - Yes, because `bird` owns `foobar`
 - No, because `sesame` has no write permissions on `foobar`
36. What command powers down the machine safely?
- `chkconfig`
 - `gpasswd`
 - `shutdown`
 - `passwd`
 - `fdisk`
37. What does the `-v` option to the `grep` command do?
- selects lines that do not contain unprintable characters
 - selects lines that do not contain a match for the supplied pattern
 - turns on the translation of unprintable characters
 - turns off the translation of unprintable characters
 - prints the version number of the `grep` command
38. Which command line displays all the non-hidden names in the current directory that contain the case-insensitive word `hi` (and no other names)?
- `echo ?[HhIi]?`
 - `echo *(H,h,I,i)*`
 - `echo *[hiHI]*`
 - `echo ?[HhIiHhIi]?`
 - `echo *[Hh][Ii]*`

39. If I mount one file system on directory **/a** and another file system on directory **/b**, how can I link the existing file **/a/foo** to the new pathname **/b/new**?
- `ln -s /b/new /a/foo`
 - `ln /a/new /b/foo`
 - `ln /a/foo /b/new`
 - `ln -s /a/foo /b/new`
 - `ln /b/new /a/foo`
40. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.
- ```

d-w-rw---x 2 bob ted 60 Jan 1 1:00 foo
--w-rwxrwx 1 pat bg1 0 Jan 1 1:00 foo/bar

```
- bob** can list names in the directory
  - pat** can access and write on the file
  - bob** can create a new file in the directory
  - bob** can access and write on the file
  - pat** can rename the file
41. In an empty directory, what is output on your screen by:
- ```

mkdir -p a/b/c 1/2/3 ; mv a 1/2 ; find . -name c

```
- `./1/2/3/a/b/c`
 - `./1/2/a/b/c`
 - `./1/2/3/a/b`
 - `./1/a`
 - `./1/2/a`
42. Which Linux device is the third partition of the first disk?
- `/dev/sd31`
 - `/dev/sd1c`
 - `/dev/sd3a`
 - `/dev/sdc1`
 - `/dev/sda3`
43. In a directory containing one file named **dog**, what is the output on your screen after this command line:
- ```

1>/dev/null ls *

```
- `ls: *: No such file or directory`
  - `dog`
  - `bash: 1>/dev/null: command not found`
  - no output
  - `*`
44. What GRUB internal command will set a partition prefix that will prefix all file names typed without partition prefixes, e.g. `/grub/menu.lst`?
- `root=(hd0,0)`
  - `root (hd0,0)`
  - `title (hd0,0)`
  - `kernel (hd0,0)`
  - `default=(hd0,0)`
45. Which command mounts a device partition on directory *dir*?
- `mount -t ext3 /mnt/sda1 dir`
  - `mount dir /dev/sda1`
  - `mount -t ext2 dir /dev/sda1`
  - `mount /mnt/sda1 dir`
  - `mount /dev/sda1 dir`
46. Given my directory **dir** and my file **dir/bar** owned by me, which permissions allow me to access and change or create new content (data) in the file **dir/bar** but not delete the file?
- Permissions **500** on directory **dir** and **200** on file **dir/bar**.
  - Permissions **500** on directory **dir** and **100** on file **dir/bar**.
  - Permissions **600** on directory **dir** and **700** on file **dir/bar**.
  - Permissions **400** on directory **dir** and **400** on file **dir/bar**.
  - Permissions **200** on directory **dir** and **200** on file **dir/bar**.

47. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.  
`d-wxr-xrw- 2 bob pgg 60 Jan 1 1:00 foo`  
`-r-xrwxr-x 1 bob bg1 0 Jan 1 1:00 foo/bar`
- pat** can access and write on the file
  - bob** can list names in the directory
  - pat** can rename the file
  - bob** can create a new file in the directory
  - bob** can access and write on the file
48. To shut down your Linux system in an orderly fashion:
- logout from each terminal and the machine will shut down
  - type the three key **[CONTROL]-[ALT]-[F1]**
  - type the three key **[CONTROL]-[ALT]-[DEL]**
  - run `shutdown -h now`
  - select VMware "VM|Power Off this virtual machine"
49. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.  
`drw-----x 2 pat ted 60 Jan 1 1:00 foo`  
`--w--w-r-x 1 pat bg1 0 Jan 1 1:00 foo/bar`
- bob** can rename the file
  - pat** can access and write on the file
  - bob** can list names in the directory
  - bob** can access and write on the file
  - bob** can create a new file in the directory
50. What command terminates processes based on their name (not safe!):
- `crontab`
  - `kill`
  - `ps lxxw`
  - `killall`
  - `dmesg`
51. Given the following, can user **bird** in group **sesame** append to **foobar**?  
`drwxrw-rwx 2 root sesame 4096 Oct 7 14:00 .`  
`-rw-rw-r-- 1 bird sesame 1024 Oct 4 14:05 foobar`
- Yes, because **bird** owns **foobar**
  - Yes, because **bird** has write permissions on **foobar**
  - Yes, because **sesame** has write permissions on **foobar**
  - No, because execute permissions are not set for **bird** on **foobar**
  - No, because the directory is not accessible to **bird**
52. Given this successful command line (note the dot argument):  
`cd /tmp ; mkdir dir ; cd dir ; chmod u-x .`  
 Which next command will execute without any "permission denied" errors?
- `ls .`
  - `ls /tmp/dir/.`
  - `ls /tmp/dir`
  - `ls ..`
  - `ls /tmp/dir/..`
53. Given the following, can user **bird** in group **sesame** rename `./foo` to **bar**?  
`d----wx--- 2 root sesame 4096 Oct 7 14:00 .`  
`----- 1 bird sesame 123 Oct 4 14:05 foo`
- Yes; permissions don't apply because **bird** owns **foo**
  - No, because **bird** has no permissions on **foo**
  - No, because the directory has no permissions for other users
  - Yes, because **bird**'s group matches the group writable directory
  - No, because **bird** cannot read the directory

54. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.  
`dr--r-x-w- 2 bob pgg 60 Jan 1 1:00 foo`  
`-rwxrwxr-x 1 bob bg2 0 Jan 1 1:00 foo/bar`
- bob** can create a new file in the directory
  - pat** can rename the file
  - bob** can access and write on the file
  - pat** can access and write on the file
  - bob** can list names in the directory
55. Dereference the following symlink **bar** into its equivalent absolute path:  
`ln -s ../b/../../a/./foo /tmp/a/b/bar`
- `/tmp/a/b/bar`
  - `/tmp/foo`
  - `/tmp/a/foo`
  - `/tmp/b/foo`
  - `/tmp/b/bar`
56. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.  
`d-w-rwx-wx 2 bob ted 60 Jan 1 1:00 foo`  
`-r-xrwxrwx 1 pat bg2 0 Jan 1 1:00 foo/bar`
- bob** can create a new file in the directory
  - bob** can access and write on the file
  - pat** can access and write on the file
  - pat** can rename the file
  - bob** can list names in the directory
57. Given my directory **dir** and my file **dir/bar** owned by me, which permissions allow me to access and change or create new content (data) in the file **dir/bar** but not delete the file?
- Permissions **500** on directory **dir** and **600** on file **dir/bar**.
  - Permissions **600** on directory **dir** and **700** on file **dir/bar**.
  - Permissions **300** on directory **dir** and **200** on file **dir/bar**.
  - Permissions **400** on directory **dir** and **400** on file **dir/bar**.
  - Permissions **100** on directory **dir** and **100** on file **dir/bar**.
58. Give the GRUB device name for the third partition of the fourth disk:
- `(hd3,2)`
  - `(sd2,3)`
  - `(hd4,3)`
  - `(sdd,3)`
  - `(hd2,3)`
59. What command creates a new user account?
- `groupmod`
  - `passwd`
  - `gpasswd`
  - `makeuser`
  - `useradd`
60. Dereference the following symlink **bar** into its equivalent absolute path:  
`ln -s ../b/../../b/../../foo /tmp/a/b/bar`
- `/tmp/foo`
  - `/tmp/a/foo`
  - `/tmp/b/foo`
  - `/tmp/b/bar`
  - `/tmp/a/b/bar`

61. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.  
`dr-xrwx-wx 2 pat pgg 60 Jan 1 1:00 foo`  
`-r-xrwxr-x 1 bob bg2 0 Jan 1 1:00 foo/bar`
- bob** can access and write on the file
  - bob** can list names in the directory
  - pat** can rename the file
  - bob** can create a new file in the directory
  - pat** can access and write on the file
62. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.  
`dr-x-wx--x 2 bob ted 60 Jan 1 1:00 foo`  
`-r-x-w-r-x 1 bob bg1 0 Jan 1 1:00 foo/bar`
- bob** can create a new file in the directory
  - pat** can rename the file
  - pat** can access and write on the file
  - bob** can access and write on the file
  - bob** can list names in the directory
63. If you run this as you, to create two new files: `$ sudo touch a >b`
- root** owns both new files
  - this command fails due permissions
  - root** owns new file **a** – you own new file **b**
  - you own new file **a** – **root** owns new file **b**
  - you own both new files
64. Under what directory are system configuration files usually stored?
- `/grub/boot/`
  - `/etc`
  - `/var/log/`
  - `/log/var/`
  - `/boot/grub`
65. Which file contains a list of possible kernels to load and run after POST?
- `/boot/grub/grub.conf`
  - `/etc/fstab`
  - `/etc/inittab`
  - `/etc/init.d`
  - `/load/kernel.conf`
66. Given the following, can user **bird** in group **sesame** remove `./foo`?  
`drwxr-xrwx 2 root sesame 4096 Oct 7 14:00 .`  
`-rwxrwxrwx 1 bird sesame 123 Oct 4 14:05 foo`
- Yes; permissions don't apply because **bird** owns **foo**
  - No, because the directory is not accessible to **bird**
  - Yes, because **bird** matches the writable other permissions
  - Yes, because **bird** has full permissions on **foo**
  - No, because **bird** has no write permission on the directory
67. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.  
`dr-xr-x-w- 2 bob pgg 60 Jan 1 1:00 foo`  
`-r-xrwxr-x 1 bob bg1 0 Jan 1 1:00 foo/bar`
- pat** can rename the file
  - bob** can create a new file in the directory
  - bob** can access and write on the file
  - bob** can list names in the directory
  - pat** can access and write on the file

68. Given my directory **dir** and my file **dir/bar** owned by me, which permissions allow me to access and change or create new content (data) in the file **dir/bar** but not delete the file?
- Permissions **100** on directory **dir** and **200** on file **dir/bar**.
  - Permissions **600** on directory **dir** and **700** on file **dir/bar**.
  - Permissions **100** on directory **dir** and **100** on file **dir/bar**.
  - Permissions **200** on directory **dir** and **200** on file **dir/bar**.
  - Permissions **400** on directory **dir** and **400** on file **dir/bar**.
69. What value **umask** gives a new file permissions **r--r-----**?
- 110**
  - 447**
  - 220**
  - 326**
  - 440**
70. Given my directory **dir** and my file **dir/f** owned by me, which permissions allow me to access and change or create new content (data) in the file **dir/f** but not delete the file?
- Permissions **100** on directory **dir** and **200** on file **dir/f**.
  - Permissions **200** on directory **dir** and **200** on file **dir/f**.
  - Permissions **600** on directory **dir** and **700** on file **dir/f**.
  - Permissions **400** on directory **dir** and **400** on file **dir/f**.
  - Permissions **500** on directory **dir** and **100** on file **dir/f**.
71. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.
- ```
dr-x-wx--- 2 pat bg1 60 Jan 1 1:00 foo
-rwxrwxr-x 1 pat ted  0 Jan 1 1:00 foo/bar
```
- bob** can list names in the directory
 - bob** can access and write on the file
 - pat** can create a new file in the directory
 - pat** can rename the file
 - bob** can create a new file in the directory
72. Given my directory **dir** and my file **dir/bar** owned by me, which permissions allow me to delete the file **dir/bar** from the directory, but not change the content (data) in the file?
- Permissions **300** on directory **dir** and **400** on file **dir/bar**.
 - Permissions **100** on directory **dir** and **300** on file **dir/bar**.
 - Permissions **300** on directory **dir** and **200** on file **dir/bar**.
 - Permissions **500** on directory **dir** and **500** on file **dir/bar**.
 - Permissions **100** on directory **dir** and **500** on file **dir/bar**.
73. What value **umask** gives a new directory permissions **rw--w---x**?
- 156**
 - 211**
 - 421**
 - 432**
 - 621**
74. Given my directory **dir** and my file **dir/c** owned by me, which permissions allow me to delete the file **dir/c** from the directory, but not change the content (data) in the file?
- Permissions **100** on directory **dir** and **100** on file **dir/c**.
 - Permissions **300** on directory **dir** and **300** on file **dir/c**.
 - Permissions **300** on directory **dir** and **500** on file **dir/c**.
 - Permissions **100** on directory **dir** and **200** on file **dir/c**.
 - Permissions **500** on directory **dir** and **400** on file **dir/c**.
75. Which of these is a likely kernel version number?
- #1 SMP Sat Nov 7 21:25:57 EST 2009**
 - 83 Linux**
 - 2.6.31.5-127.fc12.i686.PAE**
 - 139285**
 - Linux**

76. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.
`dr---wx--x 2 bob ted 60 Jan 1 1:00 foo`
`--w--w-r-x 1 bob bg2 0 Jan 1 1:00 foo/bar`
- bob** can list names in the directory
 - bob** can access and write on the file
 - pat** can access and write on the file
 - bob** can create a new file in the directory
 - pat** can rename the file
77. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.
`d--x---w- 2 pat ted 60 Jan 1 1:00 foo`
`--w-r-xrwx 1 pat bg2 0 Jan 1 1:00 foo/bar`
- bob** can create a new file in the directory
 - pat** can rename the file
 - pat** can access and write on the file
 - bob** can list names in the directory
 - bob** can access and write on the file
78. When a user named **bob** runs a command in an executable file owned by **foo**, in a directory owned by **root**, the file executes with the permissions of:
- root and bob**
 - root**
 - bob**
 - foo**
 - root and foo**
79. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.
`d--xrwx--x 2 bob ted 60 Jan 1 1:00 foo`
`----rw--w- 1 bob bg1 0 Jan 1 1:00 foo/bar`
- bob** can create a new file in the directory
 - bob** can access and write on the file
 - pat** can access and write on the file
 - pat** can rename the file
 - bob** can list names in the directory
80. When a user named **bob** runs a command in a **setuid** executable file owned by **foo**, in a directory owned by **root**, the file executes with the permissions of:
- foo**
 - root**
 - bob**
 - root and bob**
 - root and foo**
81. What permissions are given to **newdir** after this command line: `umask 156 ; mkdir newdir`
- `rw--w----`
 - `r-x--x---`
 - `r-x-w-rw-`
 - `--xr-xrw-`
 - `rw--w---x`
82. Pick the correct order of operations:
- MBR, POST, BIOS, O/S boot
 - BIOS, POST, MBR, O/S boot
 - BIOS, MBR, POST, O/S boot
 - POST, MBR, BIOS, O/S boot
 - POST, BIOS, MBR, O/S boot

83. Given user **foo** in group **foo** and user **bar** in group **bar**, which command line enables a file to be read by both **foo** and **bar**:
- `chown foo file ; chown bar file ; chmod 440 file`
 - `chown bar file ; chown foo file ; chmod 333 file`
 - `chown foo:bar file ; chmod 077 file`
 - `chown foo:foo file ; chmod bar:bar file`
 - `chown foo:bar file ; chmod 440 file`
84. In an empty directory, what is output on your screen by:
- ```
mkdir -p a/b/c 1/2/3 ; mv a/b 1/2/3 ; find . -name c
```
- `./1/2/3/b/c`
  - `./a/b/c`
  - `./1/2/3/a/b`
  - `./1/2/a/b`
  - `./1/2/3/c`
85. The **minimum** permissions you need to copy a file **foo** from directory **a** to directory **b** are:
- `rx` on **a**, `wx` on **b**, `w` on **foo**
  - `x` on **a**, `wx` on **b**, `r` on **foo**
  - `wx` on **a**, `wx` on **b**, none on **foo**
  - `rw` on **a**, `wx` on **b**, none on **foo**
  - `wx` on **a**, `wx` on **b**, `rw` on **foo**
86. The **minimum** permissions you need to append to a file **foo** in directory **a** are:
- `wx` on **a**, `w` on **foo**
  - `rw` on **a**, `rw` on **foo**
  - `wx` on **a**, none on **foo**
  - `x` on **a**, `w` on **foo**
  - `rw` on **a**, none on **foo**
87. Can three different files have the same inode number on three different file systems?
- yes: inode numbers are only unique inside a file system
  - no: inode numbers are unique across all file systems
  - yes: if the files are all names for the same inode
  - no: inode numbers only apply to directories, not files
  - no: you can't have inode numbers on three file systems
88. In an empty directory, what is output on your screen by:
- ```
mkdir -p a/b/c 1/2/3 ; mv a/b/c 1/2 ; find . -name c
```
- `./1/2/a/b/c`
 - `./1/2/3/a/b/c`
 - `./1/a/b/c`
 - `./1/2/b/c`
 - `./1/2/c`
89. Given my directory **dir** and my file **dir/f** owned by me, which permissions allow me to delete the file **dir/f** from the directory, but not change the content (data) in the file?
- Permissions **300** on directory **dir** and **500** on file **dir/f**.
 - Permissions **700** on directory **dir** and **200** on file **dir/f**.
 - Permissions **600** on directory **dir** and **300** on file **dir/f**.
 - Permissions **500** on directory **dir** and **500** on file **dir/f**.
 - Permissions **600** on directory **dir** and **500** on file **dir/f**.
90. Given the following, can user **bird** in group **sesame** copy `./foo` to **bar**?
- ```
drwx-wx--x 2 root sesame 4096 Oct 7 14:00 .
--wxrwxrwx 1 bird sesame 123 Oct 4 14:05 foo
```
- Yes; permissions don't apply because **bird** owns **foo**
  - Yes, because **bird** has write permissions on **foo**
  - No, because the directory is not readable by **bird**
  - No, because the directory has no write permissions for **bird**
  - No, because **foo** has no read permissions for **bird**

91. What value **umask** gives a new file permissions **r--r-----**?
- 237
  - 446
  - 220
  - 440
  - 110
92. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.
- ```
dr-xrwx--x 2 pat pgg 60 Jan 1 1:00 foo
--w----r-x 1 bob bg2  0 Jan 1 1:00 foo/bar
```
- pat** can rename the file
 - bob** can access and write on the file
 - bob** can list names in the directory
 - pat** can access and write on the file
 - bob** can create a new file in the directory
93. In an empty directory, what permissions are on file **???** after these commands:
- ```
touch ??? *** ; chmod 111 *
chmod 222 ? ; chmod 444 '*'
```
- w--w--w-
  - x--x--x
  - rw-rw-rw-
  - r--r--r--
  - wx-wx-wx
94. Process signals in increasing order of strength:
- TERM KILL HUP
  - TERM HUP KILL
  - KILL HUP TERM
  - HUP TERM KILL
  - HUP KILL TERM
95. Approximately how big is an **fdisk** partition size of **12345678 blocks**?
- 12 GB
  - 1.2 GB
  - 12 MB
  - 1.2 TB
  - 12 TB
96. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.
- ```
dr-xr-xrwx 2 pat bg1 60 Jan 1 1:00 foo
-rwxrwxr-x 1 pat ted  0 Jan 1 1:00 foo/bar
```
- bob** can list names in the directory
 - pat** can create a new file in the directory
 - pat** can rename the file
 - bob** can access and write on the file
 - bob** can rename the file
97. What value **umask** gives a new file permissions **r--r-----**?
- 446
 - 220
 - 440
 - 110
 - 226
98. Which command line creates a directory into which anyone can put a file, but in which nobody can see the names of the files that are there?
- mkdir protected ; cd protected ; chmod go-x .**
 - mkdir protected ; chmod 777 .**
 - mkdir protected ; chmod 333 protected**
 - mkdir protected ; cd protected ; chmod go+wx .**
 - mkdir protected ; chmod 777 protected**

99. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.
drw-r-xrwx 2 pat bg1 60 Jan 1 1:00 foo
-rwxrwxr-x 1 pat ted 0 Jan 1 1:00 foo/bar
- pat** can rename the file
 - pat** can create a new file in the directory
 - bob** can access and write on the file
 - bob** can rename the file
 - bob** can list names in the directory
100. GRUB boot menu entries are a paragraph of several lines. The keyword on the first line of the paragraph is always:
- timeout**
 - title**
 - boot**
 - kernel**
 - initrd**
101. What command modifies existing account information (and possibly home directory)?
- newuser**
 - usermod**
 - adduser**
 - makeuser**
 - passwd**
102. What value to **chmod** would change the permissions on a file to **r-----rw-?**
- 122**
 - 406**
 - 322**
 - 102**
 - 654**
103. In a directory containing one file named **dog**, what is the output on your screen after this command line:
2>/dev/null ls nosuchfile
- bash: 2>/dev/null: command not found**
 - nosuchfile**
 - no output
 - dog**
 - ls: nosuchfile: No such file or directory**
104. What high-level command fetches and tracks packages for CentOS?
- tar**
 - apt-get**
 - yum**
 - rpm**
 - wget**
105. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.
d-wx--x--x 2 bob ted 60 Jan 1 1:00 foo
-r-xr-xrwx 1 pat bg2 0 Jan 1 1:00 foo/bar
- bob** can list names in the directory
 - pat** can access and write on the file
 - pat** can rename the file
 - bob** can create a new file in the directory
 - bob** can access and write on the file
106. What GRUB line do you modify to boot a machine single-user?
- grub**
 - boot**
 - initrd**
 - timeout**
 - kernel**

107. To show all your one-time scheduled commands, type:
- `/var/log/crontab`
 - `/etc/crontab`
 - `atq`
 - `cat crontab`
 - `crontab -l`
108. What command displays the groups you are in?
- `gpasswd`
 - `groups`
 - `mkgroups`
 - `lstgroups`
 - `groupprint`
109. What command runs a file system check on a disk partition:
- `mount partition`
 - `fsck partition`
 - `fdisk partition`
 - `chkconfig partition`
 - `mkfs partition`
110. User `bob` is in groups `bg1` and `bg2`. User `pat` is in group `pgg`.
- ```
d-wx-w-rwx 2 pat bg2 60 Jan 1 1:00 foo
-rwxrwxrwx 1 pat ted 0 Jan 1 1:00 foo/bar
```
- `pat` can rename the file
  - `bob` can list names in the directory
  - `bob` can access and write on the file
  - `bob` can create a new file in the directory
  - `bob` can rename the file
111. Pick the correct order of operations:
- `swapon, fdisk, mkswap`
  - `fdisk, mkswap, swapon`
  - `swapon, mkswap, fdisk`
  - `mkswap, fdisk, swapon`
  - `fdisk, swapon, mkswap`
112. Approximately how big is an `fdisk` partition size of `123456789 blocks`?
- `123 TB`
  - `12.3 GB`
  - `123 MB`
  - `123 GB`
  - `12.3 TB`
113. Given my directory `dir` and my file `dir/c` owned by me, which permissions allow me to access and change or create new content (data) in the file `dir/c` but not delete the file?
- Permissions `100` on directory `dir` and `100` on file `dir/c`.
  - Permissions `200` on directory `dir` and `200` on file `dir/c`.
  - Permissions `600` on directory `dir` and `700` on file `dir/c`.
  - Permissions `100` on directory `dir` and `200` on file `dir/c`.
  - Permissions `400` on directory `dir` and `400` on file `dir/c`.
114. When you use `chkconfig` to enable a service for Run Level 4, the service will:
- be started immediately, if the current Run Level is 4
  - be started immediately, no matter what the current Run Level
  - be enabled for Run Level 4 but will not be started
  - be started immediately, if the current Run Level is 4 or less
  - be stopped, then started, if the current Run Level is 4

115. Which is the Linux fifth disk device?
- `/dev/sde`
  - `/dev/sda5`
  - `/dev/s5a`
  - `/dev/sd5`
  - `/dev/sd5a`
116. The **minimum** permissions you need to delete a file **foo** from directory **a** are:
- wx** on **a**, **r** on **foo**
  - wx** on **a**, **w** on **foo**
  - rw**x on **a**, none on **foo**
  - wx** on **a**, none on **foo**
  - rw**x on **a**, **rw** on **foo**
117. Name three types of partitions:
- primary, enhanced, logical
  - primary, enhanced, linear
  - primary, extended, logical
  - basic, extended, logical
  - primary, extended, linear
118. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.
- ```
d-wxrw-w- 2 pat ted 60 Jan 1 1:00 foo
-r-xr-xrwx 1 pat bg1 0 Jan 1 1:00 foo/bar
```
- bob** can list names in the directory
 - bob** can create a new file in the directory
 - bob** can access and write on the file
 - pat** can access and write on the file
 - pat** can rename the file
119. Given my directory **dir** and my file **dir/bar** owned by me, which permissions allow me to delete the file **dir/bar** from the directory, but not change the content (data) in the file?
- Permissions **700** on directory **dir** and **500** on file **dir/bar**.
 - Permissions **700** on directory **dir** and **200** on file **dir/bar**.
 - Permissions **500** on directory **dir** and **500** on file **dir/bar**.
 - Permissions **600** on directory **dir** and **300** on file **dir/bar**.
 - Permissions **600** on directory **dir** and **500** on file **dir/bar**.
120. Which file contains a list of file systems to mount when booting the system?
- `/etc/fstab`
 - `/etc/grub.conf`
 - `/var/spool`
 - `/var/log`
 - `/etc/init.d`
121. What value **umask** gives a new file permissions **r--r-----**?
- 220**
 - 337**
 - 110**
 - 446**
 - 440**
122. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.
- ```
drw-rw-rwx 2 pat bg1 60 Jan 1 1:00 foo
-rwxrwxrwx 1 pat ted 0 Jan 1 1:00 foo/bar
```
- pat** can create a new file in the directory
  - pat** can rename the file
  - bob** can access and write on the file
  - bob** can rename the file
  - bob** can list names in the directory

123. What command creates an **ext3** file system on *device* ?
- swapon -t ext3 device**
  - fdisk -t ext3 device**
  - mkfs -t ext3 device**
  - mount -t ext3 device**
  - file -t ext3 device**
124. Given the following, can user **bird** in group **sesame** copy **./foo** to **bar**?
- ```
drwxr-xrwx 2 root sesame 4096 Oct 7 14:00 .
-r-xr-xr-x 1 bird sesame 123 Oct 4 14:05 foo
```
- Yes; permissions don't apply because **bird** owns **foo**
 - No, because the directory is not accessible to **bird**
 - No, because **foo** has no write permissions for **bird**
 - Yes, because **bird** has read permissions on **foo**
 - No, because the directory has no write permissions for **bird**
125. Regarding the **-t type** option, e.g. **-t ext3**:
- you must give the type when using **fdisk**
 - you must give the type when using **swapon**
 - you can usually omit the type when using **mkfs**
 - you must give the type when using **mkswap**
 - you can usually omit the type when using **mount**
126. The **minimum** permissions you need to link a file **foo** from directory **a** to directory **b** are:
- wx** on **a**, **wx** on **b**, **r** on **foo**
 - rw** on **a**, **wx** on **b**, none on **foo**
 - x** on **a**, **wx** on **b**, none on **foo**
 - rw** on **a**, **wx** on **b**, **rw** on **foo**
 - wx** on **a**, **wx** on **b**, **w** on **foo**
127. Which **crontab** line executes at **13:54** every day?
- 54 13 * * * command**
 - 13 * * * 54 command**
 - 13 54 * * * command**
 - * * * 13 54 command**
 - * * * 54 13 command**
128. Which command line below does not show any lines from inside the file **out**?
- sort out**
 - head out**
 - more out**
 - tail out**
 - wc out**
129. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.
- ```
d---rwx--x 2 pat pgg 60 Jan 1 1:00 foo
--w----rwx 1 bob bg1 0 Jan 1 1:00 foo/bar
```
- bob** can create a new file in the directory
  - bob** can access and write on the file
  - bob** can list names in the directory
  - pat** can access and write on the file
  - pat** can rename the file
130. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.
- ```
dr-xrw-rwx 2 pat bg1 60 Jan 1 1:00 foo
-rwxrwxrwx 1 pat ted 0 Jan 1 1:00 foo/bar
```
- pat** can rename the file
 - pat** can create a new file in the directory
 - bob** can rename the file
 - bob** can access and write on the file
 - bob** can list names in the directory

131. The **minimum** permissions you need to read a file **foo** in directory **a** are:
- x** on **a**, **r** on **foo**
 - wx** on **a**, **w** on **foo**
 - rw** on **a**, **rw** on **foo**
 - rw** on **a**, none on **foo**
 - wx** on **a**, none on **foo**
132. What command connects a file system in a partition to a directory:
- mount** *partition directory*
 - mkfs** *partition directory*
 - fdisk** *partition directory*
 - fsck** *partition directory*
 - file** *partition directory*
133. What command line shows only your own processes, not all processes?
- ps**
 - ps lxww**
 - showall**
 - crontab**
 - dmesg**
134. Which of these commands makes a file owned by me, also readable by me?
- umask 300 ./myfile**
 - chmod r=u ./myfile**
 - umask 400 myfile**
 - chmod r+u myfile**
 - chmod u+r ./myfile**
135. Which of these statements is true?
- you can only remove a file name if the file is writable by you
 - you may be able to rename a file even if you do not own the file
 - you can change the permissions of any file to which you can write
 - you can only make links to files owned by you
 - you can only remove a file name if the file is owned by you
136. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.
- ```
d-wx---rw- 2 bob ted 60 Jan 1 1:00 foo
----rwxrwx 1 bob bg2 0 Jan 1 1:00 foo/bar
```
- pat** can rename the file
  - pat** can access and write on the file
  - bob** can access and write on the file
  - bob** can list names in the directory
  - bob** can create a new file in the directory
137. What value to **chmod** would change the permissions on a file to **rw-r--r--**?
- 244**
  - 311**
  - 644**
  - 211**
  - 344**
138. Which command removes adjacent duplicate lines from a file?
- dupl**
  - unique**
  - dup**
  - duplicate**
  - uniq**

139. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.  
`d-w---xr-- 2 pat ted 60 Jan 1 1:00 foo`  
`-rwxrwxrwx 1 pat bg2 0 Jan 1 1:00 foo/bar`
- bob** can create a new file in the directory
  - pat** can access and write on the file
  - bob** can list names in the directory
  - bob** can access and write on the file
  - bob** can rename the file
140. What GRUB command will display the partitions on a disk?
- `mount (hd0)`
  - `geometry (hd0)`
  - `fdisk (hd0)`
  - `ls (hd0)`
  - `cat (hd0)`
141. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.  
`d--x--xrw- 2 bob pgg 60 Jan 1 1:00 foo`  
`-r-xrwx-w- 1 bob bg2 0 Jan 1 1:00 foo/bar`
- bob** can access and write on the file
  - pat** can access and write on the file
  - pat** can rename the file
  - bob** can list names in the directory
  - bob** can create a new file in the directory
142. When you show the type of file system inside an unmounted partition, what is displayed for a new, empty partition?
- vfat** file system
  - ext2** file system (the default)
  - ext3** file system
  - data
  - ntfs** file system
143. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.  
`d--xr-x-w- 2 bob pgg 60 Jan 1 1:00 foo`  
`--w----r-x 1 bob bg2 0 Jan 1 1:00 foo/bar`
- pat** can rename the file
  - bob** can access and write on the file
  - pat** can access and write on the file
  - bob** can list names in the directory
  - bob** can create a new file in the directory
144. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.  
`d--x-wx--- 2 bob pgg 60 Jan 1 1:00 foo`  
`-r-x-w-r-x 1 bob bg1 0 Jan 1 1:00 foo/bar`
- pat** can access and write on the file
  - bob** can create a new file in the directory
  - bob** can list names in the directory
  - bob** can access and write on the file
  - pat** can rename the file
145. If I mount **sda1** on **/one** and **sda2** on **/two**, how can I link the existing file **/one/foo** to the new pathname **/two/bar**?
- `ln /two/bar /one/foo`
  - `ln /one/foo /two/bar`
  - `ln -s /one/foo /two/bar`
  - `ln -s /two/bar /one/foo`
  - `ln /one/bar /two/foo`

146. If the current directory contains 10 visible files and 5 visible sub-directories, what is the output on your screen of this command: `ls -d */.`
- 5 directory names
  - an error message because `*/.` does not exist
  - no output
  - 15 pathnames
  - `*/.`
147. Which GRUB command line displays the contents of the file `foo`?
- `mount (hd0,0)/foo`
  - `ls (hd0,0)/foo`
  - `cat (hd0,0)/foo`
  - `type (hd0,0)/foo`
  - `p (hd0,0)/foo`
148. Which command usually goes in your `.bash_profile` file?
- `source ./bashrc`
  - `./bash_profile source`
  - `./bashrc source`
  - `source ./bash_profile`
  - `cat ./bashrc`
149. The signal sent to a foreground process by typing the [Ctrl-C] key is:
- SIGINT
  - SIGKILL
  - SIGTERM
  - SIGSTOP
  - SIGHUP
150. User `bob` is in groups `bg1` and `bg2`. User `pat` is in group `pgg`.
- ```
d--x-rwx-wx 2 bob ted 60 Jan 1 1:00 foo
-r-x-w-r-x 1 bob bg2 0 Jan 1 1:00 foo/bar
```
- `bob` can list names in the directory
 - `bob` can create a new file in the directory
 - `bob` can access and write on the file
 - `pat` can access and write on the file
 - `pat` can rename the file
151. What command shows all partition names and System IDs (types) on a disk:
- `fdisk -l disk`
 - `find -l disk`
 - `mount -l disk`
 - `mkfs -l disk`
 - `fsck -l disk`
152. User `bob` is in groups `bg1` and `bg2`. User `pat` is in group `pgg`.
- ```
d-wx-w-rwx 2 pat bg1 60 Jan 1 1:00 foo
-rwxrwxrwx 1 pat ted 0 Jan 1 1:00 foo/bar
```
- `bob` can rename the file
  - `bob` can create a new file in the directory
  - `bob` can access and write on the file
  - `pat` can create a new file in the directory
  - `bob` can list names in the directory
153. In an empty directory, what permissions are on file `???` after these commands:
- ```
touch ??? *** ; chmod 111 *
chmod 222 ??? ; chmod 444 '****'
```
- `--x--x--x`
 - `-wx-wx-wx`
 - `r--r--r--`
 - `rw-rw-rw-`
 - `-w--w--w-`

154. Which command counts the number of Unix permission groups you are in?
- `umask | wc`
 - `wc groups`
 - `groups | wc`
 - `echo groups | wc`
 - `id | wc`
155. User `bob` is in groups `bg1` and `bg2`. User `pat` is in group `pgg`.
- ```
dr-x-wx--x 2 bob ted 60 Jan 1 1:00 foo
-r-xr-xrwx 1 pat bg1 0 Jan 1 1:00 foo/bar
```
- `pat` can rename the file
  - `bob` can access and write on the file
  - `bob` can create a new file in the directory
  - `pat` can access and write on the file
  - `bob` can list names in the directory
156. User `bob` is in groups `bg1` and `bg2`. User `pat` is in group `pgg`.
- ```
d--xr----x 2 bob ted 60 Jan 1 1:00 foo
--w--w-r-x 1 bob bg1 0 Jan 1 1:00 foo/bar
```
- `pat` can rename the file
 - `bob` can access and write on the file
 - `bob` can create a new file in the directory
 - `bob` can list names in the directory
 - `pat` can access and write on the file
157. Approximately how big is an `fdisk` partition size of `123456 blocks`?
- 123 GB
 - 123 KB
 - 12.3 GB
 - 12.3 MB
 - 123 MB
158. Under what directory are system log files usually stored?
- `/grub/boot`
 - `/var/log`
 - `/boot/grub`
 - `/etc/log`
 - `/log/var`
159. What minimal permissions must you have on a directory to be able to execute successfully the command `ls .` from *inside* the directory?
- `rw-`
 - `-wx`
 - `r--`
 - `r-x`
 - `--x`
160. Given this successful command line (note the dot argument):
- ```
cd /home/foo ; mkdir bar ; cd bar ; chmod a-x .
```
- Which of the following subsequent commands will execute without any "permission denied" errors?
- `ls /home/foo/bar/..`
  - `ls /home/foo/bar/.`
  - `ls .`
  - `ls /home/foo/bar`
  - `ls ..`
161. The **minimum** permissions you need to move a file `foo` from directory `a` to directory `b` are:
- `rw` on `a`, `w` on `b`, `rw` on `foo`
  - `w` on `a`, `w` on `b`, `w` on `foo`
  - `rw` on `a`, `w` on `b`, none on `foo`
  - `w` on `a`, `w` on `b`, `r` on `foo`
  - `w` on `a`, `w` on `b`, none on `foo`

162. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.
- ```
drw---x--- 2 pat bg2 60 Jan 1 1:00 foo
-r-----w- 1 pat ted  0 Jan 1 1:00 foo/bar
```
- bob** can access and write on the file
 - pat** can rename the file
 - bob** can rename the file
 - bob** can list names in the directory
 - pat** can create a new file in the directory
163. When a personal **crontab** job runs, the current working directory is set to:
- the current directory that was in use when the **crontab** job was created
 - the directory with the name **/root**
 - the HOME directory of the user who created the job
 - the system ROOT directory
 - the directory with the name **/home**
164. Given my directory **dir** and my file **dir/bar** owned by me, which permissions allow me to delete the file **dir/bar** from the directory, but not change the content (data) in the file?
- Permissions **300** on directory **dir** and **500** on file **dir/bar**.
 - Permissions **300** on directory **dir** and **300** on file **dir/bar**.
 - Permissions **500** on directory **dir** and **400** on file **dir/bar**.
 - Permissions **100** on directory **dir** and **200** on file **dir/bar**.
 - Permissions **100** on directory **dir** and **100** on file **dir/bar**.
165. If you use **ls -l** on a file owned by a deleted user, the user/owner field is:
- the name **"removed"**
 - a number instead of an account name
 - the name **"deleted"**
 - an account name in parentheses, e.g. **(luke)**
 - the number zero
166. Given a sector size of 512 bytes, approximately how many megabytes are unused before the start of a partition that begins on sector 4096?
- 20**
 - 1**
 - 2**
 - 10**
 - 4**
167. Given my directory **dir** and my file **dir/foo** owned by me, which permissions allow me to access and change or create new content (data) in the file **dir/foo** but not delete the file?
- Permissions **600** on directory **dir** and **700** on file **dir/foo**.
 - Permissions **500** on directory **dir** and **600** on file **dir/foo**.
 - Permissions **100** on directory **dir** and **100** on file **dir/foo**.
 - Permissions **400** on directory **dir** and **400** on file **dir/foo**.
 - Permissions **300** on directory **dir** and **200** on file **dir/foo**.
168. Dereference the following symlink **bar** into its equivalent absolute path:
- ```
ln -s ../b/../../a/../../foo /tmp/a/b/bar
```
- /tmp/a/b/bar**
  - /tmp/b/bar**
  - /tmp/b/foo**
  - /tmp/a/foo**
  - /tmp/foo**
169. When an **at** job runs, the current working directory is set to:
- the HOME directory of the user who created the job
  - the directory with the name **/home**
  - the current directory that was in use when the **at** job was created
  - the system ROOT directory
  - the directory with the name **/root**

170. Other than **root**, who can change the permissions of the following directory?  
**dr-xrwxrwx 17 foo bar 4096 Apr 15 16:40 .**
- only user **foo**
  - anyone except user **foo**
  - user **foo** and any user in group **bar**
  - only users in group **bar**
  - only **root** can change the permissions
171. Given the following, can user **bird** in group **sesame** copy **./foo** to **bar**?  
**drwxrw-r-x 2 root sesame 4096 Oct 7 14:00 .**  
**-rwx-wx-wx 1 bird sesame 123 Oct 4 14:05 foo**
- Yes; permissions don't apply because **bird** owns **foo**
  - Yes, because **bird** has write permissions on **foo**
  - No, because the directory is not accessible to **bird**
  - No, because **foo** has no read permissions for **bird**
  - No, because the directory has no write permissions for others
172. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.  
**dr-xrwx-wx 2 pat ted 60 Jan 1 1:00 foo**  
**-r-xr-xrwx 1 pat bg2 0 Jan 1 1:00 foo/bar**
- bob** can list names in the directory
  - pat** can access and write on the file
  - pat** can create a new file in the directory
  - bob** can access and write on the file
  - bob** can rename the file
173. The shadow password file is used:
- to store secondary passwords for times when you forget your main one
  - to hide encrypted passwords from viewing by ordinary users
  - to reduce the size of the main password file for faster access
  - to allow passwords to exist on partitions other than the ROOT
  - to keep a back-up of the main password file in case of corruption
174. To change the group of a file to **me**, type:
- chown me file**
  - chown :me file**
  - umask :me file**
  - newuser file me**
  - newuser me file**
175. Which is the best choice for an extended partition size that will hold exactly three 100MB logical partitions?
- 100MB
  - 300MB
  - 400MB
  - 290MB
  - 320MB
176. Given the following, can user **bird** in group **sesame** append to **./foo**?  
**dr-xr-xr-x 2 root sesame 4096 Oct 7 14:00 .**  
**-rw-r-xr-x 1 bird sesame 123 Oct 4 14:05 foo**
- No, because **bird** has no write permission on the directory
  - No, because execute permissions are not set for **bird** on **foo**
  - Yes, because **bird** has write permissions on **foo**
  - No, because the directory is not accessible to **bird**
  - Yes; permissions don't apply because **bird** owns **foo**
177. When you use the **service** command to **start** a service that is not currently running, the service will:
- be enabled for that Run Level, but will not be started
  - start immediately, no matter what the current Run Level
  - be enabled for the current Run Level, and will then be started
  - be enabled, and will start if valid for the current Run Level
  - be queued for a later start when changing Run Levels

178. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.  
`dr---wx--x 2 bob ted 60 Jan 1 1:00 foo`  
`-r-xrwxrwx 1 pat bg1 0 Jan 1 1:00 foo/bar`
- pat** can rename the file
  - bob** can create a new file in the directory
  - pat** can access and write on the file
  - bob** can access and write on the file
  - bob** can list names in the directory
179. What permissions are given to **newfile** after this command line: `umask 326 ; touch newfile`
- `-wxr-----`
  - `r--r-x--x`
  - `-wx-w-r-x`
  - `-wx-w-rw-`
  - `r--r-----`
180. The *difference* between the system (**root**) crontab and all the user (personal) crontabs is:
- the system crontab has the date and time in it
  - the personal crontab also has the userid in it
  - the personal crontab only runs commands once
  - the system crontab also has the userid in it
  - the personal crontab has the date and time in it
181. What command manipulates your personal list of repeated scheduled commands:
- `crontab`
  - `showall`
  - `dmesg`
  - `psmine`
  - `ps lxww`
182. Give the GRUB device name for the fourth partition of the third disk:
- `(hd2,3)`
  - `(hd4,3)`
  - `(sdd,3)`
  - `(hd3,2)`
  - `(sd2,3)`
183. User **bob** is in groups **bg1** and **bg2**. User **pat** is in group **pgg**.  
`d-wx----w- 2 pat pgg 60 Jan 1 1:00 foo`  
`-rwxrwxr-x 1 bob bg2 0 Jan 1 1:00 foo/bar`
- pat** can access and write on the file
  - bob** can create a new file in the directory
  - bob** can access and write on the file
  - pat** can rename the file
  - bob** can list names in the directory