

PRINT Name: _____ LAB Section:

Test Version: 906 One-Answer Multiple Choice 228 Questions – 10 of 10%

- ⇒ Read **all** the words of these instructions and **both** sides (back and front) of all pages.
- ⇒ Use your full, unabbreviated name on the mark-sense form. Do not abbreviate your name.
- ⇒ Put the three-digit **Test Version** above into both **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.
- ⇒ The answer to the questions below about reading/doing all these test instructions is: **Jes**

1. **Did you read all the words of the test instructions on page one?**
 - a. **Taip** (*Yes - Lithuanian*)
 - b. **Igen** (*Yes - Hungarian*)
 - c. **Jes** (*Yes - Esperanto*)
 - d. **Tak** (*Yes - Polish*)
 - e. **Sim** (*Yes - Portuguese*)
2. **My three-digit Lab Section number is:**
 - a. My lab room number, e.g. **B182, B119, J218, CA418**
 - b. My lecture section number, e.g. **010** or **020**.
 - c. The timetable section number of my weekly 2-hour lab period.
 - d. The Test Version number printed in the top left corner.
 - e. My lecture room number, e.g. **T117**
3. What is the result of this exact command line: **echo /foo bar**
 - a. all the files under directory **/foo** with the name **bar** will be displayed
 - b. the two text strings **/foo** and **bar** will be displayed
 - c. the contents of the files **/foo** and **bar** will be displayed
 - d. file **/foo** will be copied to **bar**
 - e. the names of the pathnames **/foo** and **bar** will be displayed
4. If I am in directory **/home/me** and **mt** is an empty sub-directory, what is true after this command line: **touch foo ; mkdir bar ; mv foo bar/mt**
 - a. the directory **mt** now contains a directory named **bar**
 - b. the command fails because **bar/mt** is not a directory
 - c. the directory **mt** is still empty
 - d. the directory **mt** now contains a file named **foo**
 - e. the directory **bar** now contains a file named **foo**
5. Which command line displays only the names in the current directory that are exactly three digits long (and no other names)?
 - a. **echo [3][3][3]**
 - b. **echo [?][?][?]**
 - c. **echo [0-9][0-9][0-9]**
 - d. **echo [1-3][1-3][1-3]**
 - e. **echo ???**

6. If my current directory is **/etc**, which of these pathnames is equivalent to the file name **/etc/passwd**?
 - a. **passwd**
 - b. **./etc/passwd**
 - c. **../etc/passwd/.**
 - d. **../passwd**
 - e. **/passwd**
7. Give the minimum number of directories in this pathname: **/a/b/c/d**
 - a. **4**
 - b. **5**
 - c. **2**
 - d. **3**
 - e. **1**
8. The shell expands a leading tilde (**~**) in a pathname (e.g. **~/foo**) to be:
 - a. the **ROOT** directory
 - b. the directory **/root**
 - c. the parent directory
 - d. the current directory
 - e. your **HOME** directory
9. In an empty directory, what is the output on your screen after this command line: **touch a ; ls >wc -l**
 - a. **2**
 - b. **3**
 - c. **0**
 - d. **1**
 - e. no output
10. Which command line below outputs only lines 11-15 of the Unix password file?
 - a. **head -10 /etc/passwd | tail -15 /etc/passwd**
 - b. **tail -15 /etc/passwd | head -10**
 - c. **head -15 /etc/passwd | tail -5**
 - d. **tail -10 /etc/passwd | head -15 /etc/passwd**
 - e. **head -15 /etc/passwd | tail -5 /etc/passwd**
11. If I am in directory **/home/me** and **mt** is an empty sub-directory, what is true after this command line: **touch ./foo bar ; rm mt/./foo ../me/bar**
 - a. the directory **mt** is still empty
 - b. the directory **me** now contains a file named **bar**
 - c. the command fails because the path **mt/./foo** does not exist
 - d. the command fails because the path **../me/bar** does not exist
 - e. the directory **mt** now contains a file named **foo**
12. What command shows all the lines in file **cow** that contain the string **pig**?
 - a. **grep cat cow pig**
 - b. **grep pig >cow**
 - c. **grep pig <cow**
 - d. **grep cow pig**
 - e. **cat cow > grep pig**
13. In an empty directory, how many lines are in file **foo** after this command line: **ls nosuchfile . .. 2>foo**
 - a. **1**
 - b. **4**
 - c. **2**
 - d. **0**
 - e. **3**

14. What would you type to find the string **tony** in the file **/etc/passwd**?
- `grep tony /etc/passwd`
 - `cat tony /etc/passwd`
 - `find /etc/passwd -name tony -print`
 - `find /etc/passwd -user tony -print`
 - `grep /etc/passwd tony`
15. Which of these command line will make **bar** contain all of the content of **f1** followed by all of the content of **f2**?
- `cat f1 f2 >bar`
 - `echo f1 f2 >bar`
 - `wc f1 f2 >bar`
 - `mv f1 f2 >bar`
 - `cp f1 f2 >bar`
16. What is the output on your screen of this command line:
`echo hi >hi ; head hi >hi ; wc hi`
- no output
 - 1 1 2 hi
 - 0 0 0 hi
 - 2 2 4 hi
 - 1 1 3 hi
17. In an empty directory, how many arguments are passed to the **rm** command in this command line: `date >a1 ; touch a2 ba ca >all ; rm a*`
- 1
 - 4
 - none
 - 3
 - 2
18. What is the output of this command line in an empty directory:
`touch .12 .345 .6789 ; echo .??*`
- `. . . .12 .345 .6789`
 - no output
 - an error message from **echo** saying `.??*` does not exist
 - `.??*`
 - `.12 .345 .6789`
19. If I am in directory **/home/me** and **mt** is an empty sub-directory, what is true after this command line: `touch ./foo ; mv ./mt/./foo ../me/bar`
- the directory **mt/..** now contains a file named **bar**
 - the directory **mt** now contains only a file named **bar**
 - there is a second copy of the file **foo** in the file named **bar**
 - the command fails because path `./mt/./foo` does not exist
 - the command fails because path `../me/bar` does not exist
20. How many lines are in the file **out** after this command line:
`date >f ; ls f >>f ; cat f f >out`
- 6
 - 0
 - 4
 - 2
 - 1
21. Which of these command line will make file **foo** contain all of the content of file **a** followed by all of the content of file **b**?
- `cat a >foo ; cat b >>foo`
 - `cp a b >foo`
 - `cp a >foo ; cp b >>foo`
 - `mv a b >foo`
 - `echo a b >foo`

22. Which of the command lines below can generate a non-empty file?
- `cat foo >foo`
 - `ls foo >foo`
 - `sort foo >foo`
 - `tail foo >foo`
 - `grep 'foo' foo >foo`
23. If my current directory is **/home**, which of these pathnames is equivalent to the pathname **/home/a/b/c**?
- `../home/b/c`
 - `../a/b/c`
 - `./a/b/c`
 - `/a/b/c`
 - `./home/a/b/c`
24. If my current working directory is **/home**, and my HOME directory is **/home/foo**, which command copies file **/bin/ls** into my HOME directory under the name **xx**?
- `cp ../home/./foo/./bin/ls foo/xx`
 - `cp ../foo/./bin/ls ../home/foo/xx`
 - `cp ../../bin/./ls /foo/xx`
 - `cp ../bin/ls ../foo/xx`
 - `cp ./foo/../../bin/ls ./foo/./xx`
25. What is the output of this command line in an empty directory: `cat *`
- *
 - no output on screen
 - .
 - an error message from **cat** saying `* does not exist`
 - `. ..`
26. If **foo** is a sub-directory that contains only the file **bar**, what happens after this command: `mv foo/me foo/bar`
- there is a second copy of the file **bar** in the file named **me**
 - an empty file named **me** is created
 - the command fails because **bar** is not a directory
 - there is only the file named **me** in the directory now
 - the command fails because the name **me** does not exist
27. What is the output of this command line in an empty directory:
`touch .a .b .c ; echo .??*`
- `.a .b .c`
 - no output
 - `.??*`
 - `. . . .a .b .c`
 - an error message from **echo** saying `.??*` does not exist
28. What is the output of this successful command sequence?
`cd /home/dir ; mkdir one ; mkdir two ; pwd`
- `/two`
 - `/home/dir`
 - `/home/dir/two`
 - `/home/dir/one`
 - `/home/dir/one/two`

29. Which command pipeline outputs the count of the number of manual page titles that contain the keyword "sort"?
- `man -k sort | wc`
 - `wc -k sort`
 - `man sort ; wc`
 - `wc man sort`
 - `man sort | wc`
30. If file `foo` contains 9 lines, each of which is the one-digit line number of the line in the file (1 through 9), what is the output on your screen of this command:
- ```
sort foo foo | tail -4 | head -1
```
- 8
  - 6 6
  - 1 1
  - 4 4
  - 6
31. If my current directory is `/etc`, which of these pathnames is equivalent to the pathname `/etc/x/y`?
- `../x/y`
  - `../etc/y`
  - `../etc/x/y`
  - `./etc/x/y`
  - `/x/y`
32. Which command line displays only the non-hidden names in the current directory that contain the case-insensitive word `me` (and no other names)?
- `echo *[Mm][Ee]*`
  - `echo *[me]*`
  - `echo *(M,m,E,e)*`
  - `echo *[MmEe]*`
  - `echo ?[MmEe]?`
33. In a manual page **SYNOPSIS** section, square brackets (`[ ]`) mean:
- something that is optional
  - something that is repeated
  - a GLOB pattern matching a list
  - no special meaning
  - an arithmetic expression
34. In an empty directory, how many arguments are passed to the `rm` command in this command line: `touch a a1 a2 ba ca ; rm a*`
- 2
  - 3
  - 1
  - none
  - 4
35. If `/bin/bash` is a file name, which pathname always leads to the same file?
- `../../../../bin/bash`
  - `/bin/./bash`
  - `/bin/bash/..`
  - `./bin/bash`
  - `/bin/bash/.`
36. If file `a` contains 2 lines, and file `b` contains 3 lines, then how many lines are output on your screen by this command line: `cat a | cat b`
- no output
  - 5
  - 3
  - 0
  - 2
37. In a directory that contains only the file `foo`, what happens after this command:
- ```
cp foo bar
```
- an empty file named `bar` is created
 - the command fails because the name `bar` does not exist
 - the command fails because `bar` is not a directory
 - there is a copy of the file named `foo` in the file named `bar`
 - there is only the file named `bar` in the directory now

38. Which pathname almost always leads to the same file named: `/etc/passwd`
- `/etc/passwd/.`
 - `./etc/passwd`
 - `./etc/./passwd`
 - `/etc/etc/./passwd`
 - `/etc/./passwd`
39. In an empty directory, what is the output on your screen of this command line:
- ```
echo hi >foo >bar ; cat foo
```
- `hi >foo >bar`
  - no output
  - `hi`
  - `hi >foo`
  - `cat: foo: No such file or directory`
40. What is the output of this command line in an empty directory:
- ```
touch 1 2 3 .a .ab .abc ; echo [.]*
```
- `.a .ab .abc`
 - no output
 - an error message from `echo` saying `[.]*` does not exist
 - `. .. .a .ab .abc`
 - `[.]*`
41. In which section of the manual do you find super-user and admin commands?
- 3
 - 2
 - 4
 - 8
 - 1
42. If `/bin/bash` is a file name, which pathname always leads to the same file?
- `/bin/bin/./bash`
 - `/bin/./bash`
 - `./bin/./bash`
 - `./../bin/bash`
 - `/bin/bash/.`
43. What is the output on your screen of this command line:
- ```
echo bat >pig ; echo one | tail pig
```
- `one`
  - an error message
  - `bat` followed by `one`
  - `one` followed by `bat`
  - `bat`
44. In an empty directory, what is the output on your screen after this command line:
- ```
echo hi >a ; sort * 1>/dev/null
```
- `sort: *: No such file or directory`
 - `a`
 - `sort: 1>/dev/null: No such file or directory`
 - `hi`
 - no output

45. In an empty directory, what happens after this command line:
`mkdir a b c ; mv a b c`
- the directories **a**, **b**, and **c** are moved to the current directory
 - the directories **a**, **b**, and **c** are moved to the directory **c**
 - an error message: **mv: target 'c' is not a directory**
 - the directories **a** and **b** are appended to the directory **c**
 - the directories **a** and **b** are moved into the directory **c**
46. If file **/a** contains 3 lines, and file **/b** contains 5 lines, then how many lines are output on your screen by this command line: `cat /a | sort /b`
- 2
 - 0
 - 8
 - 5
 - 3
47. What is the Unix user name for the Super-User account?
- administrator**
 - alterego**
 - root**
 - master**
 - superuser**
48. Which command line lists all possible utilities available for compiling programs?
- `grep 'compile' /etc/`
 - `man -k compile`
 - `man compile`
 - `locate compile`
 - `find compile`
49. In an empty directory, how many words are in file **foo** after this command line:
`date >.bar >.out ; ls >foo`
- 4
 - 3
 - 2
 - 0
 - 1
50. To leave a shell and let the terminal window close, type:
- exit**
 - quit**
 - bye**
 - q**
 - [CTRL-C]**
51. What is the output on your screen after this command line:
`mkdir dir ; touch dir/.aa dir/.bb ; echo dir/*`
- dir/**
 - no output
 - dir/.aa dir/.bb**
 - dir/ dir/.. dir/.aa dir/.bb**
 - dir/***
52. Which pathname almost always leads to the same file named: **/etc/passwd**?
- `./etc/passwd`
 - `/etc/passwd/.`
 - `/etc/./etc/./passwd`
 - `../etc/passwd`
 - `/etc/./etc/./passwd`
53. In an empty directory, how many words are in file **out** after this command line:
`touch 1 2 3 2 1 ; ls >out`
- 4
 - 3
 - 5
 - 6
 - 0

54. What is your HOME directory?
- The directory that your shell is in now
 - The directory into which you are placed when you first log in
 - The directory named **/home**
 - This is where "root" goes when "root" logs in to the system
 - The top directory of the Unix/Linux/BSD/OSX file system tree
55. What is the output of this command line in an empty directory: `echo *`
- no output on screen
 - ***
 - .**
 - an error message from **echo** saying *** does not exist**
 - . ..**
56. Which pathname almost always leads to the same file named: **/etc/shadow**
- `./../etc/./shadow`
 - `/etc/shadow/./.`
 - `../etc/shadow`
 - `/etc/shadow/./../.`
 - `/etc/./../shadow`
57. If my current directory is **/lib**, which of these pathnames is equivalent to the pathname **/lib/x/y**?
- `/x/y`
 - `../lib/y`
 - `../x/y`
 - `../lib/x/y`
 - `./lib/x/y`
58. In an empty directory, how many words are in file **cow** after this command line:
`touch dog dog cat ; ls >cow`
- 2
 - 4
 - 3
 - 0
 - 1
59. If file **x** contains ten lines, and file **y** contains twenty lines, then how many lines are in file **cat** after this command line:
`sort x y >z ; tail -5 y >y ; sort x y z >cat`
- 60
 - 50
 - 40
 - 45
 - 0
60. If you type the command `sleep 60`, which **CTRL** key will **interrupt** it and take you back to the command prompt?
- ^C**
 - ^U**
 - ^R**
 - ^I**
 - ^D**
61. Which command line tells you the recursive count of all pathnames under the current directory and all subdirectories?
- `find | wc`
 - `ls | wc`
 - `wc *`
 - `wc "$PWD"`
 - `wc .`
62. In an empty directory, what is the output on your screen after this command line:
`echo hi >a ; ls nosuchfile 2>/dev/null`
- ls: 2>/dev/null: No such file or directory**
 - a**
 - ls: nosuchfile: No such file or directory**
 - nosuchfile**
 - no output

63. Which command below is the best way to find a line containing an asterisk (*) in the file named `foo`?
- `fgrep ./ * foo`
 - `fgrep foo "*"`
 - `fgrep '*' foo`
 - `fgrep * foo`
 - `fgrep foo [*]`
64. If file `twenty` contains twenty lines, and file `thirty` contains thirty lines, then how many lines are output on your screen by this command line:
- ```
tail thirty | cat twenty
```
- 21
  - 50
  - 30
  - 20
  - 0
65. The command that creates a directory and all parent directories is:
- `touch a/b/c`
  - `rm -r a/b/c`
  - `mkdir -r a/b/c`
  - `mkdir -p a/b/c`
  - `rmdir -r a/b/c`
66. If file `foo` contains 9 lines, each of which is the one-digit line number of the line in the file (1 through 9), what is the output on your screen of this command:
- ```
cat foo foo | sort | tail -4 | head -1
```
- 1
 - 4
 - 8
 - no output
 - 8
67. If file `a` contains 2 lines, and file `b` contains 3 lines, then how many lines are output on your screen by this command line: `cat b | sort a`
- 3 followed by 2
 - 5
 - 3
 - 2 followed by 3
 - 2
68. If my current directory is `/etc`, which of these pathnames is equivalent to the file name `/etc/passwd`?
- `../etc/passwd/.`
 - `./../../etc/./passwd`
 - `passwd/.`
 - `./etc/passwd`
 - `/root/etc/passwd`
69. If directory `dir` contains these three four-character file names: `.123`, `.124`, `.???`, then what is the output on your screen of this command line:
- ```
echo dir/????
```
- `dir/.123 dir/.124 dir/.???`
  - `dir/????`
  - `echo: dir/????: No such file or directory`
  - `dir/.123 dir/.124`
  - no output
70. In a directory containing one file named `mt`, what is the output on your screen after this command line: `ls 2>/dev/null nosuchfile`
- `ls: nosuchfile: No such file or directory`
  - `mt`
  - `bash: 2>/dev/null: command not found`
  - no output
  - `nosuchfile`

71. In an empty directory, how many arguments are passed to the `wc` command in this command line: `touch xx yy >zz 123 .a b. ; wc ??`
- 5
  - 1
  - 0
  - 2
  - 4
72. How many arguments and options are there to the command: `wc -wc wc`
- Two options, no arguments.
  - Two arguments, no options.
  - Two command name arguments and two bundled options.
  - Two command line arguments, one of which contains two bundled options.
  - Two arguments, one of which is a single option and the other is a pathname.
73. The shell meta-character used to separate multiple separate commands on the same line of typing is:
- :
  - +
  - @
  - ,
  - ;
74. Which pathname almost always leads to the same file named: `/bin/ls`
- `./bin/./ls`
  - `./bin/./ls/.`
  - `/bin/./bin/./ls`
  - `./bin/ls`
  - `/bin/./ls`
75. In an empty directory, what happens after this command line:
- ```
touch a b c ; mv a b c
```
- an error message: `mv: target 'c' is not a directory`
 - the files `a`, `b`, and `c` are moved to the current directory
 - the files `a` and `b` are moved into the directory `c`
 - the files `a` and `b` are appended to the file `c`
 - the files `a`, `b`, and `c` are moved to the directory `c`
76. If file `foo` contains 99 lines, each of which is the two-digit line number of the line in the file (01 through 99), what is the output on your screen of this command:
- ```
sort foo foo | tail -4 | head -1
```
- 01 01
  - 04 04
  - 96
  - 98
  - 96 96
77. What is the possible output on your screen of this command line:
- ```
echo wc >date ; sort date >date ; cat date
```
- `Fri Mar 16 12:00:00 EST 2012`
 - no output on screen
 - `1 6 29 date`
 - `wc`
 - `1 6 28 date`

78. If I am in my HOME directory named `/home/myhome` and `dir` is an empty sub-directory, what is true after this command line:
`touch new ; mv ./dir/../new ../myhome/old`
- there is a second copy of the file `new` in the file named `old`
 - the parent directory of `dir` now has a file named `old` in it
 - the command fails because the path `../myhome/old` does not exist
 - the directory `dir` now contains only a file named `old`
 - the command fails because the path `./dir/../new` does not exist
79. In an empty directory, what is the output on your screen after this command line:
`touch 1 2 .a .b ; echo .*`
- `. . . .a .b`
 - `1 2`
 - an error message from `echo` saying `.*` does not exist
 - `.a .b`
 - `.*`
80. If my current directory is `/home`, and my HOME directory is `/home/me`, which command copies the password file into my HOME directory under the name `foo`?
- `cp ../etc/passwd ../me/foo`
 - `cp ../../etc/passwd /me/foo`
 - `cp me/../../etc/passwd me/foo`
 - `cp ./me/./etc/passwd ../home/me/foo`
 - `cp ../home/me/./etc/passwd ./me/./foo`
81. If I am in my HOME directory named `/home/me` and `sub` is an empty sub-directory, what is true after this command line:
`touch ./fil ; mv sub/../fil ../me/cat`
- the command fails because the path `../me/cat` does not exist
 - the directory `sub/..` now has a file named `cat` in it
 - the command fails because the path `sub/../fil` does not exist
 - the directory `sub` now contains only a file named `cat`
 - there is a second copy of the file `fil` in the file named `cat`
82. If `foo` is a sub-directory that contains only the file `bar`, what happens after this command: `cp foo/bar ../foo/./me`
- there is a second copy of the file `bar` in the file named `me`
 - the directory `foo` now contains only a file named `me`
 - the command fails because the name `foo/bar` does not exist
 - the directory `foo` is now empty
 - there is a second copy of the file `bar` in directory `foo`
83. Which command line below does *not* show any lines from inside the file `out`?
- `head out`
 - `wc out`
 - `tail out`
 - `sort out`
 - `more out`

84. What is the output of this command line in an empty directory:
`touch a .a bc .bc def ; echo [ab]*`
- `a .a bc .bc`
 - an error message from `echo` saying `[ab]*` does not exist
 - no output
 - `a bc`
 - `[ab]*`
85. Which `CTRL` key will erase a full line of typing in a terminal window?
- `^U`
 - `^D`
 - `^C`
 - `^I`
 - `^R`
86. What do you do to erase an entire line of typing in the shell?
- type `[CTRL-C]`
 - type `[CTRL-W]`
 - select the line with the mouse and use the `DEL` key
 - type `[CTRL-U]`
 - type `[CTRL-D]`
87. What is true about this command line: `date >ls ; ls -ls ls >wc`
- The shell finds and executes three different commands.
 - The file `wc` has one line in it.
 - The `ls` command is executed more than once.
 - The `wc` command counts the output of the `ls` command.
 - The `ls` command receives the output of `date` on standard input.
88. The basic purpose of a shell is:
- to format hard drives
 - to program system administration backup procedures
 - to find and run commands
 - to search for strings inside text files
 - to expand pathnames
89. Given an existing file of yours named `cat`, what is the output on your screen of this command line: `echo xx >cat ; head cat >cat ; wc cat`
- `0 0 0 cat`
 - no output
 - `2 2 4 cat`
 - `1 1 3 cat`
 - `1 1 2 cat`
90. Which command line lists all possible utilities available for compiling programs?
- `apropos compile`
 - `grep compile /etc/`
 - `locate compile`
 - `find compile`
 - `man compile`
91. If you type the command `cat`, which `CTRL` key will send an `EOF` and take you back to the command prompt?
- `^D`
 - `^E`
 - `^C`
 - `^U`
 - `^R`

92. What command can you use to delete a directory that isn't empty?
- `rm -r dir`
 - `del -r dir`
 - `deltree -r dir`
 - `rmdir -r dir`
 - `deldir -r dir`
93. What is the output of this command line in an empty directory:
- ```
touch 1 .1 23 .23 456 ; echo [12]*
```
- 1 .1 23 .23 456
  - 1 .1 23 .23
  - 1 23
  - [12]\*
  - an error message from `echo` saying `[ab]*` does not exist
94. If my current directory is `/bin`, which of these pathnames is equivalent to the file name `/bin/ls`?
- `/root/bin/ls`
  - `../bin/ls/.`
  - `../../bin/ls`
  - `./bin/ls`
  - `ls/.`
95. In an empty directory, what is the output on your screen after this command line:
- ```
echo hi >a ; ls >wc -l
```
- 2
 - a
 - no output
 - 1
 - 0
96. If file `/a` contains 40 lines, and file `/b` contains 60 lines, then how many lines are output on your screen by this command line:
- ```
sort /a /b | cat /a | cat /b
```
- 200
  - 160
  - 100
  - 60
  - 40
97. What is the output on your screen after this command line:
- ```
echo hi >a ; ls a > wc
```
- 1 1 3
 - no output
 - 1 1 2
 - 3
 - 2
98. The purpose of the `PS1` shell variable is:
- to set the shell prompt
 - to protect your HOME directory from access
 - to list your suspended jobs
 - to allow access to the ROOT directory
 - to find patterns inside a text file
99. In an empty directory, what is the output on your screen after this command line:
- ```
ls nosuchfile 2>out
```
- `nosuchfile`
  - `nosuchfile not found`
  - `2 not found`
  - `nosuchfile 2 not found`
  - no output
100. If file `/a` contains 3 lines, and file `/b` contains 5 lines, then how many lines are in file `/c` after this command line:
- ```
cat /a /b >/c ; sort /c >/c ; sort /c /a /b >/c
```
- 16
 - 0
 - 3
 - 8
 - 5

101. If file `foo` contains 9 lines, each of which is the one-digit line number of the line in the file (1 through 9), what is the output on your screen of this command:
- ```
cat foo foo | sort -r | head -4 | tail -1
```
- 8
  - 5
  - 6
  - 7
  - 9
102. How many words are in the file `x` after this command line:
- ```
echo 1 2 >x ; echo 3 >x ; echo 4 >>x
```
- 3
 - 1
 - 2
 - 4
 - 0
103. Which of these characters is *not* a shell GLOB meta-character?
- [
 - ?
 -]
 - *
 - #
104. If the current directory contains 10 visible files and 15 visible sub-directories, what is the output on your screen of this command: `ls -d */.`
- 15 directory names
 - no output
 - 25 pathnames
 - an error message because `*/.` does not exist
 - `*/.`
105. If my current working directory is `/var`, which command copies the password file into directory `/var/ian` under the name `bar`?
- `cp ../../etc/passwd ../ian/bar`
 - `cp ../ian/../../etc/passwd ian/bar`
 - `cp ../../etc/passwd /ian/bar`
 - `cp ../var/..ian/..etc/passwd ../ian/./bar`
 - `cp ../ian/..etc/passwd ../var/ian/bar`
106. If my current working directory is `/home`, and my HOME directory is `/home/me`, which command copies the password file into my HOME directory under the name `foo`?
- `cp ../etc/passwd ../me/foo`
 - `cp ../home/me/..etc/passwd ../me/./foo`
 - `cp ../../etc/passwd /me/foo`
 - `cp ../me/..etc/passwd ../home/me/foo`
 - `cp ../etc/passwd ../me/foo`
107. If file `ten` contains ten lines, and file `twenty` contains twenty lines, then how many lines are output on your screen by this command line:
- ```
cat twenty | sort ten
```
- 30
  - 10
  - 0
  - 20
  - 60

108. If I am in my HOME directory named `/home/me` and `dir` is an empty sub-directory, what is true after this command line:  
`touch new ; mv ./dir/../new ../me/old`
- the parent directory of `dir` now has a file named `old` in it
  - the command fails because the path `./dir/../new` does not exist
  - the directory `dir` now contains only a file named `old`
  - there is a second copy of the file named `new` in the file named `old`
  - the command fails because the path `../me/old` does not exist
109. If `/etc/shadow` is a file name, which pathname always leads to the same file?
- `/etc/../../../../shadow`
  - `/../../../../etc/./shadow`
  - `/etc/shadow/./.`
  - `././etc/shadow`
  - `/etc/shadow/././.`
110. In an empty directory, how many arguments are passed to the `cat` command in this command line: `touch a1 a2 ac ba .a ; cat a*`
- 3
  - 2
  - 1
  - 4
  - none
111. What is an operating system?
- A web-browser program.
  - A word-processing computer program.
  - A computer program that manages the hardware.
  - A video display card.
  - An accounting package program.
112. What is in file `foo` after this command line: `echo 1 2 >foo 3`
- `echo 1 2`
  - 3
  - nothing (empty file)
  - 1 2 3
  - 1 2
113. How can you ask the `bash` (Linux) shell to complete commands or file names for you?
- Type the first part of the command or file name and press the `[CTRL]-[D]` key.
  - Type the first part of the command or file name and press the `[ALT]-[F1]` key.
  - Type the first part of the command or file name and press the `[CTRL]-[C]` key.
  - Type the first part of the command or file name and press the `[ALT]` key.
  - Type the first part of the command or file name and press the `[TAB]` key.

114. If I am in my HOME directory named `/home/myhome` and `sub` is an empty sub-directory, what is true after this command line:  
`touch ./fil ; mv sub/../fil ../myhome/cat`
- the command fails because the path `sub/../fil` does not exist
  - the command fails because the path `../myhome/cat` does not exist
  - the directory `sub/..` now has a file named `cat` in it
  - there is a second copy of the file `fil` in the file named `cat`
  - the directory `sub` now contains only a file named `cat`
115. Which of these pathnames is *not* an absolute pathname (after all shell expansions)?
- `foo`
  - `~/foo`
  - `././foo`
  - `$HOME/foo`
  - `/foo`
116. If file `foo` contains 99 lines, each of which is the two-digit line number of the line in the file (01 through 99), what is the output on your screen of this command:  
`sort -r foo foo | tail -4 | head -1`
- 02
  - 96
  - 96 96
  - 04 04
  - 98
117. If `/etc/passwd` is a file name, which pathname always leads to the same file?
- `./etc/passwd`
  - `/etc/passwd/.`
  - `/etc/../../../../passwd`
  - `/etc/passwd/././.`
  - `././etc/./passwd`
118. The option to `ls` that shows hidden names is:
- `-1`
  - `-l`
  - `-a`
  - `-h`
  - `-i`
119. Which command line shows the file in `/bin` with the largest checksum?
- `cat /bin/* | sum | sort -nr | head -1`
  - `ls /bin/* | sum | sort -nr | head -1`
  - `sum /bin/* | sort -nr | head -1`
  - `sum /bin | sort -nr | head -1`
  - `cat /bin | sum | sort -nr | head -1`
120. If directory `dir` contains only these four three-character file names: `.on`, `.tw`, `.th`, `.f.`, then what is the output on your screen of this command line:  
`echo dir/*`
- `dir/*`
  - `dir/. dir/.. dir/.on dir/.tw dir/.th dir/.f.`
  - `dir/.f.`
  - `dir/.on dir/.tw dir/.th`
  - no output
121. Which command line displays only the non-hidden names in the current directory that contain the letter `a` (and no other names)?
- `echo [a]`
  - `echo a*`
  - `echo *a*`
  - `echo *a`
  - `echo ?a?`

122. What would you see if you typed this command: `cat /foo`
- The contents of the file `foo` located in the parent directory
  - The contents of your directory named `foo`
  - The contents of the file `foo` located in the ROOT directory
  - The contents of your subdirectory named `foo`
  - The contents of the file `foo` located in your HOME directory
123. How many words are in file `out` after this command line:  
`echo one >two >three >out`
- 3
  - 1
  - 2
  - 4
  - 0
124. If file `a` contains 20 lines, and file `b` contains 30 lines, then how many lines are in file `out` after this command line:  
`cat a b >c ; head c >c ; sort a b c >out`
- 30
  - 0
  - 50
  - 60
  - 100
125. In a manual page **SYNOPSIS** section, ellipsis (three dots) (`...`) mean:
- something that is repeated
  - a hidden directory
  - no special meaning
  - something that is optional
  - the parent directory
126. If `/etc/passwd` is a file name, which pathname always leads to the same file?
- `/etc/etc/./passwd`
  - `/etc/./passwd`
  - `./etc/./passwd`
  - `./etc/passwd`
  - `/etc/passwd/.`
127. In the output of the command `ls -a`, a dot (period) that *begins* a name signifies what?
- A name with an unprintable character.
  - A current file.
  - A name that is hidden.
  - The parent directory.
  - The current directory.
128. If file `nine` contains 9 lines, each of which is the one-digit line number of the line in the file (1 through 9), what is the output on your screen of this command:  
`sort nine nine | tail -3 | head -1`
- 8
  - 8 8
  - 1
  - 2 2
  - 9
129. What is the result of this exact command line: `cat /foo bar`
- file `/foo` will be copied to `bar`
  - the names of the pathnames `/foo` and `bar` will be displayed
  - the contents of the files `/foo` and `bar` will be displayed
  - the two text strings `/foo` and `bar` will be displayed
  - all the files under directory `/foo` with the name `bar` will be displayed
130. How many lines are in file `out` after this command line:  
`date >wc >cat >out`
- 0 0 0
  - 2
  - 0
  - 1 6 29
  - 1

131. If file `/a` contains 30 lines, and file `/b` contains 50 lines, then how many lines are in file `/c` after this command line:  
`cat /a /b >/c ; sort /c >/c ; sort /c /a /b >/c`
- 80
  - 50
  - 160
  - 30
  - 0
132. In an empty directory, how many words are in file `out` after this command line:  
`touch a ; ls >out`
- 3
  - 1
  - 4
  - 0
  - 2
133. What is the output of this command line in an empty directory:  
`touch .a .b .c ; echo [.*]`
- no output
  - `[.*]`
  - `.a .b .c`
  - `... .a .b .c`
  - an error message from `echo` saying `[.*]` does not exist
134. How many arguments does the shell pass to this `echo` command:  
`echo one two three >four five`
- 2
  - 3
  - 6
  - 4
  - 5
135. If I am in directory `/home/me` and `mt` is an empty sub-directory, what is true after this command line: `touch ./foo ; mv mt/./foo mt/./bar`
- there is a second copy of the file `foo` in the file named `bar`
  - the command fails because the path `mt/./foo` does not exist
  - the directory `./me` now contains a file named `bar`
  - the directory `mt` now contains only a file named `bar`
  - the command fails because the path `mt/./bar` does not exist
136. If a shell token with a GLOB pattern contains two slashes, how many slashes can be in each matched pathname?
- exactly two
  - zero, one, or two
  - two or more
  - one, two, or more
  - one or two
137. What is the output on your screen after this command line:  
`echo hi >ls ; cat ls > wc`
- `hi`
  - no output on screen
  - `ls`
  - `1 1 3`
  - `1 1 2`
138. If `cow` is a sub-directory that contains only the file `dog`, what happens after this command: `mv cow/dog cow/./cat`
- the directory `cow` now contains only a file named `cat`
  - the command fails because the name `cat` does not exist
  - the command fails because the name `cow/./cat` does not exist
  - the directory `cow` is now empty
  - there is a second copy of the file `dog` in the file named `cat`

139. If **foo** is a sub-directory that contains only the file **bar**, what happens after this command: `mv ./foo/bar foo/./me`
- the directory **foo** now contains only a file named **me**
  - the command fails because the name `./foo/bar` does not exist
  - there is a second copy of the file **bar** in the file named **me**
  - the directory **foo** is now empty
  - the command fails because the name **me** does not exist
140. How many lines are in the file **out** after this command line:  
`echo hi >x ; echo ho >>x ; cat x x x >out`
- 1
  - 3
  - 6
  - 2
  - 0
141. If **pig** is a sub-directory that contains only the file **dog**, what happens after this command: `mv pig/dog pig/./cat`
- the directory **pig** now contains only a file named **cat**
  - the directory **pig** is now empty
  - the command fails because the name **cat** does not exist
  - the command fails because the name `pig/./cat` does not exist
  - there is a second copy of the file named **dog** in the file named **cat**
142. What does *quoting* mean on a shell command line?
- typing a "control" character using the [CTRL] key
  - using a leading tilde ("~") on a pathname to mean your HOME directory
  - setting the PS1 variable to be your shell prompt
  - using more than one pathname argument to a command, e.g. `rm a b c`
  - turning off the special meaning of shell meta-characters
143. If file **foo** contains 9 lines, each of which is the one-digit line number of the line in the file (1 through 9), what is the output on your screen of this command:  
`sort foo foo | tail -5 | head -1`
- 9
  - 1 1
  - 5 5
  - 1
  - 7
144. The output of the **tree** command is:
- the tree of users logged in to the system
  - an indented, recursive list of directories and their contents
  - the tree of files under your HOME directory
  - a recursive list of users logged in to the system
  - the tree of files under the ROOT directory
145. How do I search for the string **foo** in the text display output from the **man** command?
- `/foo`
  - `search foo`
  - `@foo`
  - `find foo`
  - select "Search" in the menu

146. To prevent disconnections when using the Windows version of **PuTTY**, you should make this configuration change:
- set the seconds between keepalives to 55
  - log in using your Blackboard userid
  - use your student number as your password
  - your password will not echo on your screen as you type
  - use your ACSIS password as your password
147. Which command below is the best way to find a line containing a question mark (?) in the file `/etc/passwd`?
- `grep './?' /etc/passwd`
  - `find '?' /etc/passwd`
  - `search '?' /etc/passwd`
  - `grep '?' /etc/passwd`
  - `grep /etc/passwd '?'`
148. In an empty directory, how many arguments are passed to the **cat** command in this command line: `touch a1 a2 ba ca ; cat a*`
- 4
  - 2
  - 1
  - none
  - 3
149. What is in the file **bar** after this command line:  
`echo hi >x ; echo ho >x ; mv x y >bar`
- nothing (empty file)
  - ho**
  - hi** followed by **ho**
  - hi**
  - no such file (nonexistent)
150. In an empty directory, how many words are in file **out** after this command line:  
`echo hi >a ; ls >out`
- 0
  - 3
  - 4
  - 2
  - 1
151. If directory **dir** contains these four three-character file names: `.aa`, `.ab`, `.a?`, `.a*`, then what is the output on your screen of this command line:  
`echo dir/???`
- `dir/.aa dir/.ab dir/.a? dir/.a*`
  - `dir/???`
  - `dir/.a?`
  - `dir/.aa dir/.ab`
  - no output
152. In an empty directory, what is the output on your screen after this command line:  
`ls 2>/dev/null nosuchfile`
- `ls: /dev/null: No such file or directory`
  - `ls: 2>/dev/null nosuchfile: No such file or directory`
  - no output
  - `ls: nosuchfile: No such file or directory`
  - `nosuchfile`
153. In an empty directory, how many words are in file **pig** after this command line:  
`touch pig pig ; ls >pig`
- 1
  - 4
  - 0
  - 3
  - 2

154. How many lines are in the file **bar** after this command line:  
`echo hi >x ; echo ho >>x ; cat x >bar`  
 a. 4            b. 2            c. 0            d. 6            e. 1
155. The output of the **find** command is:  
 a. finds lines in a file matching a pattern  
 b. a recursive list of users logged in to the system  
 c. finds patterns in a file corresponding to lines  
 d. a recursive list of pathnames  
 e. account names matching a pattern
156. If I am in directory **/home/me** and **mt** is an empty sub-directory, what is true after this command line:  
`touch ./mt/foo ; mv mt/./foo mt/../../me/./y`  
 a. there is a second copy of the file **foo** in the file named **y**  
 b. the command fails because the path **mt/../../me** does not exist  
 c. the directory **mt** is still empty  
 d. the command fails because the path **mt/./foo** does not exist  
 e. the directory **mt** now contains only a file named **y**
157. What is the output of this command line in an empty directory:  
`touch 1 2 3 .a .b .c ; echo .??*`  
 a. **.a .b .c**  
 b. **. . . 1 2 3 .a .b .c**  
 c. **. . . .a .b .c**  
 d. an error message from **echo** saying **.??\*** does not exist  
 e. **.??\***
158. Which command line does *not* show any lines from inside the file **bat**?  
 a. **less bat**            b. **tail bat**            c. **ls bat**  
 d. **head bat**            e. **sort bat**
159. If my current directory is **/lib**, which of these pathnames is equivalent to the file name **/lib/foo**?  
 a. **./lib/foo**            b. **/foo**            c. **../lib/foo/.**  
 d. **./foo**            e. **../foo**
160. Given the pathname **a/b/c**, the *basename* of this pathname is:  
 a. **a/b**            b. **b/c**            c. **a**            d. **b**            e. **c**
161. In which section of the manual do you find standard commands?  
 a. 2            b. 1            c. 3            d. 8            e. 4
162. If my current directory is **/home**, which of these pathnames is equivalent to the pathname **/home/a/b/c**?  
 a. **../home/a/b/c**            b. **/a/b/c**  
 c. **./home/a/b/c**            d. **../a/b/c**  
 e. **../home/b/c**

163. If directory **cow** contains only these four three-character file names: **.AA**, **.A1**, **.BB**, **.B.**, then what is the output on your screen of this command line:  
`echo cow/*`  
 a. **cow/.B.**  
 b. **cow/\***  
 c. **cow/.AA cow/.A1 cow/.BB**  
 d. **cow/.AA cow/.A1 cow/.BB cow/.B.**  
 e. no output
164. What is the output on your screen of this command line:  
`echo pig >one ; echo cow | head -2 one`  
 a. **pig** followed by **cow**            b. **cow**  
 c. **pig**            d. **cow** followed by **pig**  
 e. an error message
165. If file **foo** contains 9 lines, each of which is the one-digit line number of the line in the file (**1** through **9**), what is the output on your screen of this command:  
`cat foo foo | cat | tail -4 | head -1`  
 a. 6            b. 9            c. 7            d. 8            e. 5
166. In an empty directory, how many lines are in file **out** after this command line:  
`ls . .. nosuchfile 2>out`  
 a. 2            b. 0            c. 3            d. 1            e. 4
167. If **pig** is a sub-directory that contains only the file **dog**, what happens after this command: `mv pig/dog pig/./cat`  
 a. the command fails because the name **pig/./cat** does not exist  
 b. the directory **pig** now contains only a file named **cat**  
 c. the directory **pig** is now empty  
 d. there is a second copy of the file **dog** in the file named **cat**  
 e. the command fails because the name **cat** does not exist
168. If file **a** contains 2 lines, and file **b** contains 3 lines, then how many lines are in file **c** after this command line:  
`cat a a >c ; head b >>a ; cat c b >c a`  
 a. 0            b. 12            c. 10            d. 8            e. 7
169. If I am in my HOME directory named **/home/ian** and **mt** is an empty sub-directory, what is true after this command line:  
`touch ../ian/cat ; cp ./mt/./cat ./mt/./dog`  
 a. the command fails because the path **./mt/./cat** does not exist  
 b. the file named **cat** is now renamed to **dog**  
 c. the directory **mt** is still empty  
 d. the directory **mt** now has a file named **dog** in it  
 e. the directory **mt** now contains two files

170. If **foo** is a sub-directory that contains only the file **bar**, what happens after this command: **mv foo/./bar foo/./me**
- the command fails because the name **foo/./bar** does not exist
  - there is a second copy of the file **bar** in the file named **me**
  - the command fails because the name **me** does not exist
  - the directory **foo** is now empty
  - the directory **foo** now contains only a file named **me**
171. To make the **bash** shell complete commands or file names, you type the first part of the command or file name and then press this key:
- [ALT]**
  - [CTRL]-[D]**
  - [CTRL]-[C]**
  - [ALT]-[F1]**
  - [TAB]**
172. Which command line displays the contents of the Unix **passwd** file one page at a time?
- cat /etc/passwd less**
  - cat less | /etc/passwd**
  - /etc/passwd cat less**
  - /etc/passwd | less**
  - less /etc/passwd**
173. Which of these statements is true?
- Unix commands can be entered in upper-case or lower-case letters; they are equivalent.
  - To delete a word from the shell command line, type **[CTRL]-[D]**
  - Unix commands must be entered in lower-case letters.
  - To erase an entire line of typing, type **[CTRL]-[D]**.
  - To indicate End-of-File (no more input), type **[CTRL]-[C]**.
174. What is the correct syntax to redirect both standard output and standard error into the same output file?
- date 1>out 2>1**
  - date 2>1 >out**
  - date >out 2>&1**
  - date 1>out 2>out**
  - date 2>&1 >out**
175. If **/etc/passwd** is a file name, which pathname always leads to the same file?
- ./../etc/./passwd**
  - /etc/./../passwd**
  - ../etc/passwd**
  - /etc/passwd/./../**
  - /etc/passwd/./.**
176. Which of the following commands will leave **file1** non-empty?
- head file1 > file1**
  - sort file1 > file1**
  - tail file1 > file1**
  - wc file1 > file1**
  - cat file1 > file1**
177. What is the result of this exact command line: **ls /foo bar**
- the contents of the files **/foo** and **bar** will be displayed
  - all the files under directory **/foo** with the name **bar** will be displayed
  - the names of the pathnames **/foo** and **bar** will be displayed
  - the two text strings **/foo** and **bar** will be displayed
  - file **/foo** will be copied to **bar**

178. If I am in directory **/home/me** and **mt** is an empty sub-directory, what is true after this command line: **touch foo ; mkdir bar ; mv foo mt/bar**
- the command fails because **mt/bar** is not a directory
  - the directory **mt** now contains a file named **foo**
  - the directory **mt** is still empty
  - the directory **bar** now contains a file named **foo**
  - the directory **mt** now contains a file named **bar**
179. In a directory that contains only the file **foo**, what happens after this command: **mv foo bar**
- the command fails because the name **bar** does not exist
  - there is only the file named **bar** in the directory now
  - an empty file named **bar** is created
  - the command fails because **bar** is not a directory
  - there is a copy of the file named **foo** in the file named **bar**
180. In the output of the command **ls -a**, the one-character name **.** signifies what?
- A name with an unprintable character.
  - The parent directory.
  - The ROOT directory.
  - A current file.
  - The current directory.
181. If my current working directory is **/home**, and my HOME directory is **/home/me**, which command copies the password file into my HOME directory under the name **foo**?
- cp ../etc/passwd ../home/me/foo**
  - cp ../../etc/passwd /me/foo**
  - cp me/../../etc/passwd me/foo**
  - cp ../etc/passwd ../me/foo**
  - cp ../home/me/../../etc/passwd ../me/./foo**
182. What is the absolute pathname of the Unix/Linux password (account) file?
- /etc/passwd**
  - /usr/passwd**
  - /lib/passwd**
  - /bin/passwd**
  - /var/passwd**
183. What is the output on your screen of this command line: **echo pig >one ; echo bat | tail one**
- bat** followed by **pig**
  - an error message
  - pig**
  - bat**
  - pig** followed by **bat**

184. In a directory containing one file named **dog**, what is the output on your screen after this command line: `1>/dev/null ls *`
- dog**
  - `ls: *: No such file or directory`
  - `bash: 1>/dev/null: command not found`
  - no output
  - \*
185. To change your own account password, use this exact command line:
- `$ passwd`
  - `$ passwd cst8207`
  - `$ passwd options LOGIN`
  - `$ passwd root`
  - `$ passwd cst8207.idallen.ca`
186. If file **/a** contains 30 lines, and file **/b** contains 50 lines, then how many lines are output on your screen by this command line: `cat /a | sort /b`
- 50
  - 30
  - 80
  - 0
  - 20
187. If I am in my HOME directory named **/home/me** and **x** is an empty sub-directory, what is true after this command line:
- ```
touch ./x/fil ; mv x/./fil x/./././me/./y
```
- there is a second copy of the file **fil** in the file named **y**
 - the command fails because the path **x/./././me** does not exist
 - the directory **x** is still empty
 - the directory **x** now contains only a file named **y**
 - the command fails because the path **x/./fil** does not exist
188. In an empty directory, how many arguments are passed to the **wc** command in this command line: `date >o1 ; touch a1 b2 out >o1 ; wc o*`
- 2
 - 4
 - 5
 - 1
 - 3
189. Which of these statements is true?
- The **file** command creates a new, empty file in the current directory
 - To erase an entire line of typing, type **[ALT]-[DELETE]**.
 - Command **apropos** is an exact synonym for command **man**.
 - To interrupt a Unix process from the keyboard, type **[CTRL]-[D]**.
 - To indicate End-of-File (no more input) to a program, type **[CTRL]-[D]**.
190. In an empty directory, what is the output on your screen after this command line:
- ```
ls out 2>/dev/null
```
- out**
  - no output
  - `ls: out: No such file or directory`
  - `ls: /dev/null: No such file or directory`
  - `ls: out 2>/dev/null: No such file or directory`

191. If file **x** contains ten lines, and file **y** contains twenty lines, then how many lines are in file **cat** after this command line:
- ```
sort x y >z ; tail -5 x >x ; sort x y z >cat
```
- 50
 - 40
 - 0
 - 55
 - 60
192. What command displays the sizes of files in the current directory?
- `ls -p`
 - `ls -l`
 - `ps -s`
 - `cat -s`
 - `ps -l`
193. The option to **ls** that shows which names are directories is:
- `-l`
 - `-i`
 - `-a`
 - `-d`
 - `-1`
194. If my current directory is **/home**, and my HOME directory is **/home/me**, which command copies the password file into my HOME directory under the name **foo**?
- `cp ../etc/passwd ../me/foo`
 - `cp ../../etc/passwd /me/foo`
 - `cp ../etc/passwd ./me/foo`
 - `cp ./me/./etc/passwd ../home/me/foo`
 - `cp ../home/me/./etc/passwd ./me/./foo`
195. If my current directory is **/usr**, which of these pathnames is equivalent to the pathname **/usr/x/y/z**?
- `./usr/x/y/z`
 - `../usr/y/z`
 - `x/./y/z`
 - `/x/y/z`
 - `../x/y/z`
196. In a directory containing one file named **dog**, what is the output on your screen after this command line: `2>/dev/null ls nosuchfile`
- no output
 - `ls: nosuchfile: No such file or directory`
 - dog**
 - `bash: 2>/dev/null: command not found`
 - nosuchfile**
197. If file **foo** contains 9 lines, each of which is the one-digit line number of the line in the file (1 through 9), what is the output on your screen of this command:
- ```
sort foo foo | tail -2 | head -1
```
- 1
  - 8 8
  - 2 2
  - 8
  - 9
198. Which of these commands always returns you to your account HOME directory?
- `cd /home`
  - `cd /home/..`
  - `cd home`
  - `cd`
  - `cd ..`
199. In the output of `ls -a`, the two-character name **..** signifies what?
- The current directory.
  - A file or directory with double links.
  - The parent directory.
  - It begins every name that is hidden.
  - The ROOT directory.

200. If I am in directory `/home/me` and `mt` is an empty sub-directory, what is true after this command line: `touch foo ; mv ./mt/./foo ../me/bar`
- the command fails because the path `../me/bar` does not exist
  - there is a second copy of the file `foo` in the file named `bar`
  - the parent directory of `mt` now contains a file named `bar`
  - the command fails because the path `./mt/./foo` does not exist
  - the directory `mt` now contains only a file named `bar`
201. How many lines are in file `out` after this command line:  
`echo hi >dog >out >cat`
- 1
  - 2
  - 3
  - 4
  - 0
202. If `foo` is a sub-directory that contains only the file `bar`, what happens after this command: `mv foo/bar foo/moo`
- there is a second copy of the file `bar` in the file named `moo`
  - an empty file named `moo` is created
  - the command fails because `bar` is not a directory
  - the command fails because the name `moo` does not exist
  - there is only the file named `moo` in the directory now
203. In an empty directory, how many arguments are passed to the `cat` command in this command line: `date >a1 ; touch a2 ba ca ; cat a*`
- 3
  - none
  - 4
  - 1
  - 2
204. If a shell GLOB pattern fails to match anything, what happens by default? The shell:
- removes the pattern and passes nothing
  - gives an error message and does not execute
  - gives a warning message but continues
  - passes the pattern unchanged to the command
  - returns the closest match to the pattern
205. In an empty directory, what is the output on your screen after this command line:  
`ls 1>/dev/null nosuchfile`
- `ls: 1>/dev/null nosuchfile: No such file or directory`
  - no output
  - `ls: nosuchfile: No such file or directory`
  - `nosuchfile`
  - `ls: /dev/null: No such file or directory`
206. What is the output of this command line in an empty directory:  
`touch .a .b .c ; echo .*`
- an error message from `echo` saying `.*` does not exist
  - `.. .a .b .c`
  - `.a .b .c`
  - no output
  - `.*`

207. How many lines are in the file `bar` after this command line:  
`echo hi >x ; echo ho >>x ; cat x x >bar`
- 0
  - 4
  - 6
  - 2
  - 1
208. If my current directory is `/etc`, which of these pathnames is equivalent to the file name `/etc/passwd`?
- `../etc/passwd/.`
  - `/passwd`
  - `./passwd`
  - `../passwd`
  - `./etc/passwd`
209. Which of the following statements is true about this command line:  
`<dir/c cat dir/d`
- The command `cat` sees only one argument.
  - The command `cat` sees two arguments.
  - The command is always invalid.
  - The command `dir/c` sees only one argument
  - The command `dir/c` sees two arguments.
210. How do you search for the word `nongraphic` in the man page for `ls`?
- type `man -k nongraphic` at the shell
  - type `man nongraphic | grep ls` at the shell
  - type `man ls` at the shell, then `^F` (CTRL-F), then `nongraphic`
  - type `man ls` at the shell, then `/nongraphic`
  - type `man ls -nongraphic` at the shell
211. What is the output of this command line in an empty directory:  
`touch x .a .ab .cde .fgghi ; echo .??*`
- `.*?*`
  - `.cde .fgghi`
  - `.ab .cde .fgghi`
  - `.. .a .ab .cde .fgghi`
  - an error message from `echo` saying `.*?*` does not exist
212. In an empty directory, what is the output on your screen after this command line:  
`date >.foo >.bar ; ls *`
- `.. .foo .bar`
  - `*`
  - `.foo .bar`
  - an error message from `ls` saying `*` does not exist
  - no output
213. What is the output on your screen of this command line:  
`echo wc >wc ; wc wc >wc ; cat wc`
- `1 1 3 wc`
  - no output
  - `0 0 0 wc`
  - `wc`
  - `1 1 2 wc`

214. If file **/a** contains 7 lines, and file **/b** contains 5 lines, then how many lines are in file **/c** after this command line:  
`cat /a /b >/c ; sort /c >/c ; sort /c /a /b >/c`  
 a. 12      b. 0      c. 7      d. 5      e. 24
215. What is the *current directory*?  
 a. This is where "root" goes when "root" logs in to the system  
 b. The directory into which you are placed when you first log in  
 c. The directory named **..** (dot dot)  
 d. The directory named **/current**  
 e. The directory that your shell (or any Unix process) is in now
216. If file **twenty** contains twenty lines, and file **thirty** contains thirty lines then how many lines are output on your screen by this command line:  
`tail twenty | cat thirty`  
 a. 40      b. 0      c. 30      d. 20      e. 50
217. If **/bin/bash** is a file name, which pathname always leads to the same file?  
 a. **./bin/bash**      b. **/bin/bin/./bash**  
 c. **/bin/./bash**      d. **/bin/bash/.**  
 e. **./bin/./bash**
218. What happens when you try to change to the parent directory of ROOT, e.g.  
`cd / ; cd ..`  
 a. the shell issues a warning, but changes to the parent  
 b. the shell asks you to retype this invalid directory  
 c. the shell current directory is still ROOT; no change  
 d. the shell issues an error message and does not change  
 e. you go to the parent directory containing your **C:** drive
219. What command can you use to delete an empty directory?  
 a. **rmdir**      b. **delete**      c. **deldir**  
 d. **erase**      e. **mmdir**
220. In an empty directory, what is the output on your screen after this command line:  
`touch a b .1 .2 ; echo .??*`  
 a. **a b**  
 b. **.??\***  
 c. **... a b .1 .2**  
 d. **... .1 .2**  
 e. an error message from **echo** saying **.??\*** does not exist
221. If file **a** contains 2 lines, and file **b** contains 3 lines, then how many lines are in file **c** after this command line:  
`sort a b >c ; cat a >>b ; sort c b >c a`  
 a. 7      b. 8      c. 12      d. 5      e. 0

222. What is the output on your screen after these command lines:  
`echo 1 >x ; cp x y ; echo 2 >>y`  
`sort x >y ; cat y`  
 a. no output      b. 1 followed by 2      c. 1  
 d. 2 followed by 1      e. 2
223. What can you do to get back (redo) the last command you typed?  
 a. Use the "**PageUp**" key.      b. Type **[CTRL]-[BACKSPACE]**  
 c. Use the "**UpArrow**" key.      d. Type **[ALT]-[F2]**  
 e. Type **[CTRL]-[ALT]-[UP]**
224. Which Unix command line deletes a directory and everything inside it?  
 a. **deltree -all dir**      b. **rmdir -all dir**  
 c. **rm -r dir**      d. **rmdir -r dir**  
 e. **rm -all dir**
225. If **ian** is a sub-directory that contains only the file **foo**, what happens after this command: `mv ./ian/./foo ./ian/./bar`  
 a. the command fails because the name **./ian/./foo** does not exist  
 b. there is a second copy of the file **foo** in the file named **bar**  
 c. the command fails because the name **./ian/./bar** does not exist  
 d. the directory **ian** now contains only a file named **bar**  
 e. the directory **ian** is now empty
226. What is the output of this command line in an empty directory:  
`touch .1 .2 .3 4 5 6 ; echo .*`  
 a. **4 5 6**  
 b. **.1 .2 .3 4 5 6**  
 c. **... .1 .2 .3**  
 d. **.\***  
 e. an error message from **echo** saying **.\*** does not exist
227. If file **/a** contains 20 lines, and file **/b** contains 30 lines, then how many lines are in file **/c** after this command line:  
`sort /a /b >/c ; cat /a >>/b ; sort /c /b /a >/c`  
 a. 0      b. 70      c. 80      d. 120      e. 50
228. **Did you read all the words of the test instructions on page one?**  
 a. **Igen** (Yes - Hungarian)      b. **Tak** (Yes - Polish)  
 c. **Taip** (Yes - Lithuanian)      d. **Sim** (Yes - Portuguese)  
 e. **Jes** (Yes - Esperanto)