Evaluation: 157 Questions **Name: ___________________________**

Important Instructions

1. Read all the instructions and both sides of all pages.
2. Manage your time when answering questions on this test.
   Answer the questions you know, first.

Multiple Choice - 157 Questions

This is a practice test containing many practice questions. The real test will contain some questions similar to these. There are probably many more questions in this practice test than there will be time for in the real test. The real test will have approximately one question per minute.

The real test may have some questions unlike anything given here. Knowing the concepts behind the questions is necessary; memorizing these specific answers won’t help.

The answers to this test are in the Answer Key on the last page(s).

1. If directory **`/000`** contains these three four-character file names: **`.abc`**, **`.xyz`**, **`.???`**, then what is the output on your screen of the following command line:

```
echo /000/????
```

a. **`echo: /000/????: No such file or directory`**
b. **`/000/????`**
c. no output
d. **`/000/.abc /000/.xyz`**
e. **`/000/.abc /000/.xyz /000/.???`**

2. What is the output on your screen of the following sequence of commands:

```
false && echo "foo     bar $?"
```

a. no output
b. **`foo bar 0`**
c. **`foo     bar 0`**
d. **`foo     bar 1`**
e. **`foo bar 1`**

3. What is the output on your screen of the following command sequence:

```
cd /etc/passwd && echo "in $(pwd)"
```

a. **`bash: cd: /etc/passwd: Not a directory`**
b. **`in $(pwd)`**
c. no output
d. **`in /etc`**
e. **`in 0pwd)`**

4. How many arguments are passed to the command by the shell on this command line: **`<bat bat -b "-a -r" >bat bat bat`**

a. **`4`**
b. **`2`**
c. **`3`**
d. **`5`**
e. **`6`**

5. Given my directory **`dir`** and my file **`dir/bar`** owned by me, which permissions allow me to access and change the content (data) in the file **`dir/bar`** but not delete the file?

a. Permissions **`700`** on directory **`dir`** and **`300`** on file **`dir/bar`**.
b. Permissions **`300`** on directory **`dir`** and **`500`** on file **`dir/bar`**.
c. Permissions **`600`** on directory **`dir`** and **`200`** on file **`dir/bar`**.
d. Permissions **`500`** on directory **`dir`** and **`500`** on file **`dir/bar`**.
e. Permissions **`100`** on directory **`dir`** and **`200`** on file **`dir/bar`**.

6. If your **`PATH`** variable contains **`/bin:/usr/bin`**, what is the output on your screen of this command line: **`echo ’$PATH’`**

a. **`/bin:/usr/bin`**
b. **`$PATH`**
c. **`’$PATH’`**
d. **`echo: $PATH: No such file or directory`**
e. **`’/bin:/usr/bin’`**

7. What is the output on your screen of this two-command sequence:

```
cd /home || echo "cd $(pwd)"
```

a. **`cd $(pwd)`**
b. **`cd 0pwd)`**
c. no output
d. **`/home`**
e. **`cd /home`**

8. Which of the following statements is true about this shell command line:

```
>foo file bar haven
```

a. Error: The command name is missing from the command line.
b. The command **`foo`** sees three arguments.
c. The command **`file`** sees two arguments.
d. The command **`foo`** sees only two arguments
e. The command **`file`** sees three arguments.

9. If **`happy`** were a file of text containing 50 different lines, what would be the output on your screen of this exact command line:

```
cp happy sad ; diff happy sad
```

a. no output
b. the contents of file **`happy`** would be displayed
c. an error message because **`diff`** only allows one file name
d. several lines, which are the lines that are different between the two files
e. an error message because **`diff`** doesn’t allow different file names

10. What is the output on your screen of this two-command sequence:

```
cd /etc || echo "cd $(pwd)"
```

a. `cd 0pwd)`
b. `cd /etc`
c. no output
d. `cd $(pwd)`
e. `/etc`

11. What is the link count of directory **d** after this set of successful commands?

```
mkdir d ; touch f ; cd d ; ln ../f x
```

a. 3
b. 4
c. 2
d. 5
e. 1

12. Which of the following **PATH** statements makes the most sense?
a. `PATH=/bin:/usr/bin:/etc/passwd`
b. `PATH=/dev:/bin:/usr/bin:/etc`
c. `PATH=/bin:/bin/cat:/usr/bin`
d. `PATH=/bin/ls:/etc:/usr/bin`
e. `PATH=/dev/null:/usr/bin:/etc:/bin`

13. What is the output on your screen if a user signals an end-of-file from the keyboard during this command sequence? `read input || echo $?`
a. `1`
b. an error message
c. `$?`
d. `0`
e. no output on screen

14. What is the output on your screen of this sequence of three shell commands:

```
echo ls >cat ; >cat ls cat ; wc cat
```

a. `1 1 2 cat`
b. `1 1 3 cat`
c. `0 0 0 cat`
d. `1 1 4 cat`
e. no output

15. What is the output on your screen of the following sequence of commands:

```
x=ok ; y=ok ; [ x = y ]
```

a. no output
b. `0`
c. `1`
d. `bash: x: command not found`
e. `test: x: integer expression expected`

16. What appears on your screen after this sequence of commands:

```
echo 1 >x ; ln x y ; echo 2 >>y ; sort x
```

a. `1`
b. empty file - no output on the screen
c. `2` followed by `1`
d. `1` followed by `2`
e. `2`

17. What is the output on your screen of the following command sequence:

```
cd /bin && echo "echo $(pwd)"
```

a. `echo $(pwd)`
b. `echo /bin`
c. `echo 0pwd)`
d. `/bin`
e. no output

18. If a shell script named **foo** contains the line:

```
if [ ’$1’ = "$2" ] ; then echo SAME ; fi
```

then which of the following command lines will produce **SAME** as output?
a. `./foo bar ’$1’`
b. `./foo 1 "$1"`
c. `./foo bar ’bar’`
d. `./foo $1 $1`
e. `./foo ’bar’ "bar"`

19. What is the output on your screen of this command sequence:

```
echo bat >pig ; echo one | tail pig
```

a. `one`
b. `bat`
c. `bat` followed by `one`
d. `one` followed by `bat`
e. an error message

20. Given my directory **ddd** and my file **ddd/fff** owned by me, which permissions allow me to delete the file from the directory, but not change the content (data) in the file?
a. Permissions **100** on directory **ddd** and **100** on file **ddd/fff**.
b. Permissions **300** on directory **ddd** and **500** on file **ddd/fff**.
c. Permissions **100** on directory **ddd** and **200** on file **ddd/fff**.
d. Permissions **500** on directory **ddd** and **400** on file **ddd/fff**.
e. Permissions **300** on directory **ddd** and **300** on file **ddd/fff**.

21. If **dog** is an executable script containing the line: `umask 0002`
what is the output on your screen of the following sequence of commands:

```
umask 0077 ; ./dog ; umask
```

a. no output on screen
b. `0075`
c. `0002`
d. `0079`
e. `0077`

22. Which of these commands makes a file owned by me, also readable by me?

a. **`umask 400 myfile`**
b. **`chmod r=u ./myfile`**
c. **`umask 300 ./myfile`**
d. **`chmod u+r ./myfile`**
e. **`chmod r+u myfile`**

23. If **`cow=cow`** and **`pig=pig`** then which of the following command lines outputs only the date (and nothing else)?

a. **`test cow -ne pig && date`**
b. **`[!cow = pig] && date`**
c. **`[cow!=cow] || date`**
d. **`test cow = cow && date`**
e. **`[cow -ne pig] || date`**

24. Which line below passes three *separate* arguments to the **`cat`** command when placed inside a shell script named **`foo`** invoked by the command line:

```
./foo  one  two  three
```

a. **`cat "$@"`**
b. **`cat "$1 $2 $3"`**
c. **`cat "$? $? $?"`**
d. **`cat "$#"`**
e. **`cat "$*"`**

25. What is the output on your screen of this sequence of three shell commands:

```
echo ls >fil ; >fil ls fil ; wc fil
```

a. **`1 1 4 fil`**
b. no output
c. **`1 1 2 fil`**
d. **`0 0 0 fil`**
e. **`1 1 3 fil`**

26. What is the output on your screen of this command sequence:

```
echo pig >one ; echo bat | tail one
```

a. an error message
b. **`bat`**
c. **`bat`** followed by **`pig`**
d. **`pig`** followed by **`bat`**
e. **`pig`**

27. What is the output on your screen of the following sequence of commands:

```
x=0 ; y=1 ; touch $x ; test ! -z $x ; echo $?
```

a. **`test: $x: integer expression expected`**
b. the number 1 or 0 followed by another 1 or 0 on a new line
c. **`1`**
d. **`0`**
e. no output

28. Which command sequence below always outputs just the date only if the first argument is either readable or executable?

a. **`if [ "-r $1" || "-x $1" ]; then date ; fi`**
b. **`if [ -r -o -x "$1" ]; then date ; fi`**
c. **`if [ -r || -x "$1" ]; then date ; fi`**
d. **`if [ "$1" -eq -r -o "$1" -eq -x ]; then date ; fi`**
e. **`if [ -r "$1" -o -x "$1" ]; then date ; fi`**

29. If **`a=1`** and **`b=1`**, which command sequence correctly compares the two numbers as equal and prints **`OK`**?

a. **`if test a == b ; then echo OK ; fi`**
b. **`if [ $a==$b ] ; then echo OK ; fi`**
c. **`if test $b -eq $a ; then echo OK ; fi`**
d. **`if [ b = a ] ; then echo OK ; fi`**
e. **`if [ a -eq b ] ; then echo OK ; fi`**

30. What is the output on your screen of the following sequence of commands:

```
x=pig ; y=bat ; touch $x ; [ -z $x ] ; echo $?
```

a. **`1`**
b. **`test: $x: integer expression expected`**
c. no output
d. **`0`**
e. the number 0 or 1 followed by another 0 or 1 on a new line

31. What will appear on your screen if you execute this sequence of commands:

```
echo 1 >a ; ln a b ; echo 2 >b ; chmod 266 b ; cat a
```

a. **`2`**
b. **`1`** followed by **`2`**
c. **`1`**
d. no output on screen
e. an error message

32. If variable **`a`** might contain nothing (a null value - defined but empty), which command sequence correctly tests for this and prints the date?

a. **`if test "" = "$a" ; then date ; fi`**
b. **`if [ $a = /dev/null ] ; then date ; fi`**
c. **`if [ ’’’’ = ’’$a’’ ] ; then date ; fi`**
d. **`if test "" -eq $a ; then date ; fi`**
e. **`if [ "$a" = * ] ; then date ; fi`**

33. What is the output on your screen of the following sequence of commands:

```
i=0 ; test $i = 00 ; echo $?
```

a. no output
b. the number 0 or 1 followed by another 0 or 1 on a new line
c. **`test: $i: integer expression expected`**
d. **`1`**
e. **`0`**

34. Which of these commands makes a file owned by me, also executable by me?
 a. **`umask 111 myfile`**
 b. **`umask 777 myfile`**
 c. **`chmod x=u ./myfile`**
 d. **`chmod x+u myfile`**
 e. **`chmod u+x ./myfile`**

35. In an empty directory, how many lines are in file **`foo`** after this command line:

```
ls  nosuchfile  .  ..  2>foo
```

 a. **`4`**
 b. **`2`**
 c. empty file (no data)
 d. **`1`**
 e. **`3`**

36. What is true about this output from **`ls -il foo bar`**

```
23 -rwxr----- 3 root root 2 Jul 31 12:33 foo
24 -rwxr----- 3 root root 2 Jul 31 12:33 bar
```

 a. this output is not possible
 b. **`foo`** and **`bar`** are two of three names for this file
 c. **`foo`** and **`bar`** are names for the same file
 d. **`foo`** and **`bar`** each have two names (four names total)
 e. **`foo`** and **`bar`** are names for different files

37. What is the correct syntax to redirect both standard output and standard error into the same output file?
 a. **`command 2>out >out`**
 b. **`command 2>1 >out`**
 c. **`command >out 2>1`**
 d. **`command 2>&1 >out`**
 e. **`command >out 2>&1`**

38. If **`/bin/bat`** is a program that outputs **`foo`** and **`/usr/bin/bat`** is a program that outputs **`hi`** what is the output on your screen of this shell command sequence:

```
PATH=/usr:/usr/bin:/bin ; bat
```

 a. **`foo`** followed by **`hi`**
 b. **`bash: bat: command not found`**
 c. **`hi`** followed by **`foo`**
 d. **`hi`**
 e. **`foo`**

39. Which of the following **`PATH`** statements makes the most sense?
 a. **`PATH=/bin:/bin/cat:/usr/bin`**
 b. **`PATH=/usr:/bin:/usr/bin:/etc`**
 c. **`PATH=/bin/ls:/etc:/usr/bin`**
 d. **`PATH=/bin/sh:/usr/bin:/etc:/bin`**
 e. **`PATH=/bin:/usr/bin:/etc/passwd`**

40. If **`a=aaa`** and **`b=bbb`** then what is the output on your screen of the following command sequence: **`if $a = $b ; then echo $a ; fi`**
 a. **`test: aaa: integer expression expected`**
 b. no output
 c. **`aaa`**
 d. **`test: $a: integer expression expected`**
 e. **`bash: aaa: command not found`**

41. What is the output on your screen of this command sequence:

```
true && echo Hello     There $?
```

 a. **`Hello There ?`**
 b. **`Hello     There ?`**
 c. no output
 d. **`Hello     There 1`**
 e. **`Hello There 0`**

42. What is the output on your screen of the following sequence of commands:

```
x=1 ; y=2 ; [ $x -ge $y ] ; echo $?
```

 a. **`test: $x: integer expression expected`**
 b. **`0`**
 c. the number 0 or 1 followed by another 0 or 1 on a new line
 d. **`1`**
 e. no output

43. In an empty directory, what appears on your screen after this command line?

```
ls 1>/dev/null nosuchfile
```

 a. **`ls: nosuchfile: No such file or directory`**
 b. **`ls: 1>/dev/null nosuchfile: No such file or directory`**
 c. **`ls: /dev/null: No such file or directory`**
 d. no output
 e. **`nosuchfile`**

44. If a shell script named **`foo`** contains the line:

```
if [ ’$3’ = "$2" ] ; then echo SAME ; fi
```

then which of the following command lines will always produce **`SAME`** as output?
 a. **`./foo 2 ’$3’ 1`**
 b. **`./foo $3 "$2" $1`**
 c. **`./foo ’$1’ "$3" $2`**
 d. **`./foo $1 ’$2’ $3`**
 e. **`./foo $1 $2 $3`**

45. Which correct command sequence below always outputs just the date only if the first argument is **both** not empty **and** a directory?
 a. **`if [ -s -a -d "$1" ]; then date ; fi`**
 b. **`if [ "-s $1" && "-d $1" ]; then date ; fi`**
 c. **`if [ "$1" -eq -f -a "$1" -eq -d ]; then date ; fi`**
 d. **`if [ -d "$1" -a -s "$1" ]; then date ; fi`**
 e. **`if [ -s && -d "$1" ]; then date ; fi`**

46. Which command line shows just the type and permissions of file **`foo`**?
   a. **`cat foo | ls -l | awk ’ ’ ’\n’ | head -1`**
   b. **`ls -l foo | awk ’ ’ ’\n’`**
   c. **`ls -l foo | tr ’ ’ ’\n’ | head -1`**
   d. **`ls -l foo | awk ’ ’ ’\n’ | head -1`**
   e. **`tr ’ ’ ’\n’ <ls -l foo | head -1`**

47. Which command sequence correctly searches for the **`chars`** and then prints **`OK`** if it is found inside the password file?
   a. **`if [ grep chars /etc/passwd ] ; then echo OK ; fi`**
   b. **`if test chars /etc/passwd ; then echo OK ; fi`**
   c. **`if test chars = /etc/passwd ; then echo OK ; fi`**
   d. **`if grep chars </etc/passwd ; then echo OK ; fi`**
   e. **`if [ test chars /etc/passwd ] ; then echo OK ; fi`**

48. In an empty directory, how many lines are in file **`bar`** after this command line:

```
ls  .  nosuchfile  1>bar
```

   a. empty file (no data)
   b. **2**
   c. **4**
   d. **1**
   e. **3**

49. What is the output on your screen of the following command sequence if run in a directory containing 123 files with names that are all the numbers from **`1`** to **`123`** inclusive: **`glob="*" ; echo "$glob"`**
   a. **`*`**
   b. the file names **`1`** through **`123`**
   c. **`$glob`**
   d. the file names **`1`** through **`123`**, surrounded by quotes
   e. **`"$glob"`**

50. What is the output on your screen of the following sequence of commands:

```
x=cow ; y=dog ; touch $y ; test -n $y ; echo $?
```

   a. no output
   b. **0**
   c. **`test: $y: integer expression expected`**
   d. the number 0 or 1 followed by another 0 or 1 on a new line
   e. **1**

51. What is in the file **`cow`** after this command line:

```
echo a >b ; echo b >a ; mv b a >cow
```

   a. **`a`**
   b. no such file (nonexistent)
   c. nothing - empty file - no data
   d. **`a`** followed by **`b`**
   e. **`b`**

52. What can you do to get back (redo) the last command you typed to the **`bash`** (Linux) shell?
   a. Type [CONTROL]-[ALT]-[DEL]
   b. Use the "UpArrow" key.
   c. Type [ALT]-[F2]
   d. Type [CONTROL]-[BACKSPACE]
   e. Use the "PageUp" key.

53. What is the output on your screen of the following command sequence:

```
a=1 ; b=2 ; test $a -ge $b ; echo $?
```

   a. no output
   b. **1**
   c. **`test: $a: integer expression expected`**
   d. **0**
   e. the number 1 or 0 followed by another 1 or 0 on a new line

54. In an empty directory, what is the shell output on your screen of these three commands: **`touch .1 .2 .3 11 12 ; a=’.1* .2*’ ; echo ’$a’`**
   a. **`11 .1 12 .2`**
   b. **`.1 .2`**
   c. **`’.1* .2*’`**
   d. **`$a`**
   e. **`.1* .2*`**

55. Which command line shows just the count of lines in the file?
   a. **`wc file | awk ’{print #1}’`**
   b. **`wc file | awk ’{print 1}’`**
   c. **`wc file | awk ’[print #1]’`**
   d. **`wc file | awk ’{print $1}’`**
   e. **`wc file | awk ’[print $1]’`**

56. In an empty directory, what is the length of the longest file name (including extension) after this sequence of commands?

```
date >sixsix ; cp sixsix no ; mv sixsix four ; gzip no
```

   a. 5
   b. 2
   c. 3
   d. 6
   e. 4

57. If **`a=ant`** and **`b=bat`** then what is the output on your screen of the following command sequence: **`[ $a = bat -o $b = bat ] ; echo $?`**
   a. no output
   b. **`test: $a: integer expression expected`**
   c. **0**
   d. the number 1 or 0 followed by another 1 or 0 on a new line
   e. **1**

58. Which of these first lines will cause this executable file to be interpreted using the Bash shell?
 a. **`!#/bin/bash -u`**
 b. **`#!/bin/bash`**
 c. **`$!/bin/bash -u`**
 d. **`!/bin/bash`**
 e. **`#/bin/bash`**

59. Which of the following **`PATH`** statements makes the most sense?
 a. **`PATH=/bin:/bin/cat:/usr/bin`**
 b. **`PATH=/bin:/usr/bin:/etc/passwd`**
 c. **`PATH=/bin/sh:/usr/bin:/etc:/bin`**
 d. **`PATH=/bin/ls:/etc:/usr/bin`**
 e. **`PATH=/bin:/usr/bin:/etc`**

60. What is the possible output on your screen of this command line:

```
    echo wc >date ; sort date >date ; cat date
```

 a. **`1 6 28 date`**
 b. **`Mon Sep 27 15:58:34 EDT 2004`**
 c. **`1 6 29 date`**
 d. **`wc`**
 e. no output on screen

61. How many arguments are passed to the command by the shell on this command line: **`<bar bar -b"-a ’-r’ >bar" bar >out`**
 a. **`2`**
 b. **`5`**
 c. **`3`**
 d. **`4`**
 e. **`6`**

62. What appears on your screen after this command line?

```
    echo hi >ls ; cat ls > wc
```

 a. **`hi`**
 b. no output on screen
 c. **`1  1  3`**
 d. **`ls`**
 e. **`1  1  2`**

63. What is the output on your screen of the following command sequence:

```
    i=0 ; test $i = 00 ; echo $?
```

 a. **`0`**
 b. no output
 c. **`test: $i: integer expression expected`**
 d. the number 0 or 1 followed by another 0 or 1 on a new line
 e. **`1`**

64. Which of these statements is true?
 a. The **`ls dir`** command looks up the directory argument **`dir`** in your **`$PATH`**.
 b. If **`/q`** is an empty directory, **`echo /q/.*`** produces an error message.
 c. Typing **`./script`** and **`bash script`** always give identical results.
 d. If **`/p`** is an empty directory, **`ls /p/.*`** produces an error message.
 e. Either single or double quotes will stop shell GLOB (wildcard) patterns from expanding.

65. What is true about this output from **`ls -ild foo bar`**

```
96 -rwxr-xr-x 2 root root 3 Jan 24 01:03 foo
96 -rwxr-xr-x 3 root root 3 Jan 24 01:03 bar
```

 a. **`foo`** and **`bar`** are two of five names for this file
 b. **`foo`** and **`bar`** are names for different files
 c. **`foo`** and **`bar`** each have three names (six names total)
 d. **`foo`** and **`bar`** are names for the same file
 e. this output is not possible

66. Which command line below outputs only lines 10-15 of the 16-line file named **`cow`**?
 a. **`head -15 | tail -6 cow`**
 b. **`head -16 cow | tail -5 cow`**
 c. **`tail -16 cow | head -10`**
 d. **`head -15 cow | tail -6`**
 e. **`tail -10 cow | head -6 cow`**

67. Which command sequence correctly searches for **`foo`** and then prints the date if it is found inside the file **`bar`**?
 a. **`if test foo bar ; then date ; fi`**
 b. **`if [ test foo bar ] ; then date ; fi`**
 c. **`if test foo = bar ; then date ; fi`**
 d. **`if [ grep foo bar ] ; then date ; fi`**
 e. **`if grep <bar foo ; then date ; fi`**

68. If **`/bin/foo`** is a program that outputs **`one`** and **`/usr/bin/foo`** is a program that outputs **`two`**, what is the output on your screen of this command sequence:

```
    PATH=/dev:/usr/bin:/usr:/bin:/etc ; /bin/foo
```

 a. **`two`** followed by **`one`**
 b. **`two`**
 c. **`one`**
 d. **`one`** followed by **`two`**
 e. **`bash: /bin/foo: command not found`**

69. Which command sequence correctly compares the two numbers and prints **`OK`**?
 a. **`if ( let 4 > 3 ) ; then echo OK ; fi`**
 b. **`if ( ! 4 < 3 ) ; then echo OK ; fi`**
 c. **`if [ 4 > 3 ] ; then echo OK ; fi`**
 d. **`if [ ! 4 <= 3 ] ; then echo OK ; fi`**
 e. **`if [ 4 -gt 3 ] ; then echo OK ; fi`**

70. A shell script named `foo` is executed as follows: `./foo 1 2 "3 4" 5`
Inside the script is the line: `echo "$3"`
What is the output on your screen from this line?
a. `"3`
b. `1 2 3`
c. `3 4`
d. `$3`
e. `2 3 4`

71. What is the output on your screen if a user signals an end-of-file from the keyboard during this command sequence? `read input ; echo $?`
a. `1`
b. an error message
c. `0`
d. `$?`
e. no output on screen

72. Which line below is most likely to be the beginning of an error message?
a. `echo 1>&2 "... "`
b. `echo 2>$1 "... "`
c. `echo 1<&2 "... "`
d. `echo 2>&1 "... "`
e. `echo 2<$1 "... "`

73. If a shell script named `foo` contains the line:

```
if [ "$1" = ’$2’ ] ; then echo SAME ; fi
```

then which of the following command lines will produce `SAME` as output?
a. `./foo "bar" ’bar’`
b. `./foo ’$2’ bar`
c. `./foo bar bar`
d. `./foo "$1" ’$2’`
e. `./foo $2 $2`

74. What is the output on your screen of the following sequence of commands:

```
cd /etc && echo "in $(pwd)"
```

a. `in /etc`
b. `bash: cd: /etc: No such file or directory`
c. no output
d. `in $(pwd)`
e. `in 0pwd)`

75. What is the output on your screen of the following command sequence:

```
a=sky ; touch $a ; test -z $a ; echo $?
```

a. no output
b. `sky`
c. `0`
d. `test: $a: integer expression expected`
e. `1`

76. In an empty directory, what is the length of the longest file name (including extension) after this sequence of commands?

```
date >four ; cp four five5 ; mv five5 hi ; bzip2 hi
```

a. 7
b. 3
c. 6
d. 5
e. 4

77. What is the output on your screen of this two-command sequence if run in a directory containing 888 files with names that are all the numbers from `1` to `888` inclusive: `cow="*" ; echo ’$cow’`
a. the file names `1` through `888`, surrounded by quotes
b. `’$cow’`
c. the file names `1` through `888`
d. `*`
e. `$cow`

78. Given the following command line: `read  xx  yy  zz`
which user keyboard input line below will assign the text `22` to the shell variable named `yy`?
a. `11  22  33`
b. `11;22;33`
c. `11:22:33`
d. `11,22,33`
e. `xx=11  yy=22  zz=33`

79. In a directory containing one file named `dog`, what appears on your screen after this command line? `2>/dev/null ls nosuchfile`
a. `nosuchfile`
b. `ls: nosuchfile: No such file or directory`
c. `dog`
d. no output on screen
e. `bash: 2>/dev/null: command not found`

80. What is the output on your screen of this two-command sequence if run in a directory containing 765 files with names that are all the numbers from `1` to `765` inclusive: `foo="*" ; echo $foo`
a. the file names `1` through `765`
b. an asterisk (’`*`’) and the file names `1` through `765`
c. all the file names that start with an asterisk (’`*`’)
d. `$foo`
e. `*`

81. If **bar** is a script containing the line **TERM=vt100 ; export TERM**, what is the output on your screen of the following command sequence:

```
TERM=linux ; ./bar ; echo $TERM
```

a. **vt100**
b. **$TERM**
c. **bar**
d. **linux**
e. **TERM**

82. What is the output on your screen of this sequence of three shell commands:

```
umask 162 ; touch newfile ; ls -l newfile
```

a. **---xrw--w- 1 me me 0 Oct 1 01:12 newfile**
b. **-rw----r-- 1 me me 0 Oct 1 01:12 newfile**
c. **-rw---x-w- 1 me me 0 Oct 1 01:12 newfile**
d. **-rw---xr-x 1 me me 0 Oct 1 01:12 newfile**
e. **----rw--w- 1 me me 0 Oct 1 01:12 newfile**

83. In response to the following command line: **read var1 var2 var3** which user keyboard input line below will assign the text **three** to the shell variable named **var3**?
a. **one,two,three**
b. **$var1="one" $var2="two" $var3="three"**
c. **one two three**
d. **var1=one var2=two var3=three**
e. **one:two:three**

84. Which line below passes three *separate* arguments to the **sort** command when placed inside a shell script named **foo** invoked by the command line:

```
./foo 111 222 333
```

a. **sort "$1 $2 $3"**
b. **sort "$*"**
c. **sort "$@"**
d. **sort "$? $? $?"**
e. **sort "$#"**

85. What is the shell output on your screen of this two-command sequence:

```
cd /home/alleni && echo "In $(pwd)"
```

a. **"In $(pwd)"**
b. **In $(pwd)**
c. no output
d. **In 0pwd)**
e. **In /home/alleni**

86. What is true about this output from **ls -il foo bar**

```
35 -rw-rw-r-- 2 bin  bin  3 Jan 24 01:03 foo
36 -rw-rw-r-- 2 bin  bin  3 Jan 24 01:03 bar
```

a. **foo** and **bar** each have two names (four names total)
b. **foo** and **bar** each have three names (six names total)
c. **foo** and **bar** are names for the same file
d. **foo** and **bar** are two of three names for this file
e. this output is not possible

87. What is the output on your screen of the following sequence of commands:

```
x=0 ; test $x ; echo $?
```

a. **test: $x: integer expression expected**
b. **0**
c. **1**
d. no output
e. the number 0 or 1 followed by another 0 or 1 on a new line

88. How many arguments and options are there to the command:

```
wc <infile -wc >wc
```

a. Four arguments, only one of which is an option argument with two options.
b. One argument: a single option argument with two option letters.
c. Three arguments, each of which is a pathname argument.
d. Three arguments: two file names and one option argument with two options.
e. Two arguments: an input file and an option argument with two options.

89. Which command line tells you the recursive count of all pathnames under the current directory and all subdirectories?
a. **find | wc**
b. **wc ***
c. **wc "$PATH"**
d. **wc .**
e. **ls | wc**

90. How can you ask the **bash** (Linux) shell to complete commands or file names for you?
a. Type the first part of the command or file name and press the **[ALT]-[F1]** key.
b. Type the first part of the command or file name and press the **[ALT]** key.
c. Type the first part of the command or file name and press the **[TAB]** key.
d. Type the first part of the command or file name and press the **[CTRL]-[C]** key.
e. Type the first part of the command or file name and press the **[CTRL]-[D]** key.

91. What is the output on your screen of the following sequence of commands:

```
x=0 ; y=1 ; touch $x ; test ! -n $x ; echo $?
```

a. **test: $x: integer expression expected**
b. the number 1 or 0 followed by another 1 or 0 on a new line
c. **1**
d. no output
e. **0**

92. What is the output on your screen of the following sequence of commands:

```
a=9 ; b=9 ; [ $a -le $b ] ; echo $?
```

a. **1**
b. no output
c. the number 1 or 0 followed by another 1 or 0 on a new line
d. **test: $a: integer expression expected**
e. **0**

93. If **bar** is an executable script containing the line **dog=bat** then what is the output on your screen of this sequence of three commands:

```
dog=cat ; ./bar ; echo "the ’$dog’ ate"
```

a. **the $dog ate**
b. **the ’cat’ ate**
c. **the ’dog’ ate**
d. **the ’$dog’ ate**
e. **the ’bat’ ate**

94. What appears on your screen after this sequence of commands:

```
echo 1 >x ; cp x y ; echo 2 >>y ; sort x >y ; cat y
```

a. **2** followed by **1**
b. **1** followed by **2**
c. **2**
d. empty file - no output on the screen
e. **1**

95. If **foo** is a file containing the first column of the output of the **last** command, which command line shows the most frequent login?

a. **sort foo | uniq -c | sort -nr | head -1**
b. **cat sort foo | uniq -c | sort -nr | head -1**
c. **sort foo > uniq -c ; sort -nr uniq | head -1**
d. **sort | uniq -c | sort -nr | head -1 foo**
e. **uniq -c foo | sort -nr | head -1**

96. What is the link count of directory **d** after this set of successful commands?

```
mkdir d ; cd d ; touch f ; ln f x ; ln f y
```

a. 5
b. 1
c. 3
d. 2
e. 4

97. What is true about this output from **ls -il foo bar**

```
72 -rwxrwxrwx 2 bin  bin  3 Oct 30 09:23 foo
72 -r--r--r-- 2 bin  bin  3 Oct 30 09:23 bar
```

a. **foo** and **bar** are two of three names for this file
b. this output is not possible
c. **foo** and **bar** are names for different files
d. **foo** and **bar** each have two names (four names total)
e. **foo** and **bar** are names for the same file

98. What is the link count of file **foo** after this set of successful commands?

```
rm foo ; touch foo ; ln foo bar
cp bar x ; ln x y ; ln bar z ; ln z a
```

a. 1
b. 3
c. 4
d. 2
e. 5

99. Which command tells you the count of lines in the **bash** manual page?

a. **which bash | wc**
b. **apropos bash | wc**
c. **man bash | wc**
d. **whereis bash | wc**
e. **man bash > wc ; cat wc**

100. Which line below puts the count of the number of lines in the password file into the variable **foo**?

a. **foo=$(wc /etc/passwd | awk echo $1)**
b. **foo=$(wc -l /etc/passwd | awk "print $1")**
c. **foo=$(cat -c /etc/passwd)**
d. **foo=$(awk -F: /etc/passwd | wc -l)**
e. **foo=$(wc -l </etc/passwd)**

101. If file **foo** occupies two disk blocks, how many disk blocks are in use after this sequence of commands:

```
cp foo bar ; ln bar one ; cp one two ; ln one ten
```

a. 10 blocks
b. 2 blocks
c. 4 blocks
d. 6 blocks
e. 8 blocks

102. What is the output on your screen of the following sequence of commands:

```
x=0 ; [ $x = 00 ] ; echo $?
```

a. **0**
b. the number 0 or 1 followed by another 0 or 1 on a new line
c. no output
d. **test: $x: integer expression expected**
e. **1**

103. What is the output on your screen of the following command sequence:

```
echo hi >wc ; wc wc >hi ; cat hi
```

a. **hi**
b. **1 1 3 wc**
c. **1 1 2 wc**
d. **0 0 0 wc**
e. no output

104. Which command sequence correctly searches for the `chars` and then prints `OK` if it is found inside the password file?
   a. `grep chars >/etc/passwd || echo OK`
   b. `grep chars </etc/passwd || echo OK`
   c. `grep chars >/etc/passwd && echo OK`
   d. `grep chars  /etc/passwd || echo OK`
   e. `grep chars </etc/passwd && echo OK`

105. Which command sequence below always outputs just the date only if the first argument is both not empty and a directory?
   a. `if [ -s -a -d "$1" ]; then date ; fi`
   b. `if [ -s && -d "$1" ]; then date ; fi`
   c. `if [ -d "$1" -a -s "$1" ]; then date ; fi`
   d. `if [ "-s $1" && "-d $1" ]; then date ; fi`
   e. `if [ "$1" -eq -f -a "$1" -eq -d ]; then date ; fi`

106. Which command line locates scripts in the `/bin` directory?
   a. `ls /bin/* | file | grep script`
   b. `file /bin/* | grep script`
   c. `cat /bin | file | grep script`
   d. `file /bin | grep script`
   e. `cat /bin/* | file | grep script`

107. What is the link count of directory `d` after this set of successful commands?

```
mkdir d ; mkdir d/a ; touch d/b
```

   a. 2
   b. 1
   c. 3
   d. 5
   e. 4

108. Given the following command line: `read  one  two  three`
which user keyboard input line below will assign the text `bb` to the shell variable named `two`?
   a. `one=aa  two=bb  three=cc`
   b. `aa,bb,cc`
   c. `aa  bb  cc`
   d. `aa;bb;cc`
   e. `aa:bb:cc`

109. Which command stops people from using `write` to put lines of text on your screen?
   a. `write n`
   b. `umask 000`
   c. `stop 0`
   d. `mesg n`
   e. `chmod 000`

110. If file `foo` contains nine lines, each of which is the number of the line in the file, what is the output on your screen of this command:

```
cat foo foo | sort | tail -4 | head -1
```

   a. 1
   b. 4
   c. 6
   d. 8
   e. no output

111. In an empty directory, what is the length of the longest file name created by the following two-command sequence: `a="1234 123 12 1" ; touch '$a'`
   a. 2 characters
   b. 13 characters
   c. 1 character
   d. 4 characters
   e. 3 characters

112. What is the output on your screen of the following sequence of commands:

```
x=0 ; [ $x ] ; echo $?
```

   a. `0`
   b. the number 0 or 1 followed by another 0 or 1 on a new line
   c. `test: $x: unary operator expected`
   d. `1`
   e. no output

113. Which command counts the number of Unix permission groups you are in?
   a. `wc groups`
   b. `groups | wc`
   c. `umask | wc`
   d. `echo groups | wc`
   e. `id | wc`

114. Which command sequence below always outputs just the date only if the first argument is both a directory and not empty?
   a. `if [ "$1" -eq -f -a "$1" -eq -d ]; then date ; fi`
   b. `if [ "-s $1" && "-d $1" ]; then date ; fi`
   c. `if [ -s -a -d "$1" ]; then date ; fi`
   d. `if [ -s "$1" -a -d "$1" ]; then date ; fi`
   e. `if [ -n "$1" -o -d "$1" ]; then date ; fi`

115. What is the output on your screen of the following sequence of commands:

```
a=pig ; b=bat ; touch $b ; test -n $b ; echo $?
```

   a. no output
   b. `0`
   c. `test: $b: integer expression expected`
   d. the number 0 or 1 followed by another 0 or 1 on a new line
   e. `1`

116. What is the output on your screen of the following sequence of commands:

```
x=1 ; y=2 ; test $x -le $y ; echo $?
```

a. `0`
b. `test: $x: integer expression expected`
c. no output
d. the number 0 or 1 followed by another 0 or 1 on a new line
e. `1`

117. Which command tells you the full absolute pathname of the `lynx` command?

a. `whereis lynx`
b. `whereis | grep lynx`
c. `absolute lynx`
d. `echo "$PATH" | grep lynx`
e. `absolute "$PATH" | grep lynx`

118. If `a=ant` and `b=bat` then what is the output on your screen of the following command sequence: `[ $a = ant -a $b = ant ] ; echo $?`

a. `1`
b. no output
c. `test: $a: integer expression expected`
d. `0`
e. the number 1 or 0 followed by another 1 or 0 on a new line

119. What is the output on your screen of the following sequence of commands:

```
a=1 ; b=2 ; test $a -ge $b ; echo $?
```

a. no output
b. `0`
c. the number 1 or 0 followed by another 1 or 0 on a new line
d. `test: $a: integer expression expected`
e. `1`

120. What is the link count of directory `x` after this set of successful commands?

```
mkdir x ; mkdir x/y ; mkdir x/z ; mkdir x/y/z
```

a. 1
b. 5
c. 3
d. 2
e. 4

121. Which command sequence below always outputs just the date only if the first argument is either a file or a directory?

a. `if [ -f "$1" -o -d "$1" ]; then date ; fi`
b. `if [ "-f $1" || "-d $1" ]; then date ; fi`
c. `if [ -f -o -d "$1" ]; then date ; fi`
d. `if [ -f || -d "$1" ]; then date ; fi`
e. `if [ "$1" -eq -f -o "$1" -eq -d ]; then date ; fi`

122. What is the output on your screen of the following sequence of commands:

```
a=cow ; b=dog ; touch $a ; test -z $a ; echo $?
```

a. no output
b. the number 1 or 0 followed by another 1 or 0 on a new line
c. `0`
d. `1`
e. `test: $a: integer expression expected`

123. If `x=5` and `y=5`, which command sequence correctly compares the two numbers as equal and prints `OK`?

a. `if test $x -eq $y ; then echo OK ; fi`
b. `if [ $x==$y ] ; then echo OK ; fi`
c. `if ( x == y ) ; then echo OK ; fi`
d. `if [ x = y ] ; then echo OK ; fi`
e. `if test x -eq y ; then echo OK ; fi`

124. What is the output on your screen of this sequence of three shell commands:

```
umask 457 ; mkdir dir ; ls -ld dir
```

a. `d-wx-w---- 2 me me 128 Jan 9 9:34 dir`
b. `dr--r-xrwx 2 me me 128 Jan 9 9:34 dir`
c. `d-w--w---- 2 me me 128 Jan 9 9:34 dir`
d. `dr-xr-xrwx 2 me me 128 Jan 9 9:34 dir`
e. `d-wx-w-rwx 2 me me 128 Jan 9 9:34 dir`

125. What is the link count of directory `d` after this set of successful commands?

```
mkdir d ; cd d ; touch a ; mkdir b c d
```

a. 5
b. 4
c. 3
d. 2
e. 6

126. If `bat=12` and `cat=99` then which of the following command lines outputs only the word `hi` (and nothing else)?

a. `[bat -eq 12] || echo hi`
b. `[ bat -ne cat ] && echo hi`
c. `[!bat = cat] && echo hi`
d. `[bat!=bat] || echo hi`
e. `[ bat = bat ] && echo hi`

127. Which command sequence below does *not* generate an error message from the last command in the sequence?

a. `mkdir foo ; touch foo/bar ; rmdir foo`
b. `mkdir ddd ddd/fff fff ; rmdir ddd/fff`
c. `cat /etc/passwd > mail idallen@idallen.ca`
d. `mkdir foo bar ; ln foo xxx`
e. `date >foo ; cp foo/. bar`

128. Which command sequence correctly searches for the **`chars`** and then prints **`OK`** if it is found inside the password file?
   a. `if grep chars /etc/passwd ; then echo OK ; fi`
   b. `if [ test chars /etc/passwd ] ; then echo OK ; fi`
   c. `if test chars = /etc/passwd ; then echo OK ; fi`
   d. `if [ grep chars /etc/passwd ] ; then echo OK ; fi`
   e. `if test chars /etc/passwd ; then echo OK ; fi`

129. What is the output on your screen of the following command sequence:

```
x=1 ; y=2 ; test $x -le $y ; echo $?
```

   a. `test: $x: integer expression expected`
   b. `1`
   c. the number 0 or 1 followed by another 0 or 1 on a new line
   d. no output
   e. `0`

130. If variable **`mt`** might contain nothing (a null value - defined but empty), which command sequence correctly tests for this and prints **`OK`**?
   a. `if [ "$mt" = * ] ; then echo OK ; fi`
   b. `if [ $mt -eq "" ] ; then echo OK ; fi`
   c. `if [ ’’$mt’’ = ’’’’ ] ; then echo OK ; fi`
   d. `if [ "$mt" = "" ] ; then echo OK ; fi`
   e. `if [ $mt -eq : ] ; then echo OK ; fi`

131. What is the output on your screen of the following command sequence:

```
date=’Friday March 12’ ; test date = date
```

   a. no output
   b. `1`
   c. `Fri Mar 12 10:20:39 EST 2004`
   d. `test: too many arguments`
   e. `0`

132. What appears on your screen after this sequence of commands:

```
echo 1 >x ; ln x y ; echo 2 >>y ; head -1 x >y ; cat y
```

   a. empty file - no output on the screen
   b. **`1`** followed by **`2`**
   c. **`2`** followed by **`1`**
   d. `1`
   e. `2`

133. If **`/bin/foo`** is a program that outputs **`mom`** and **`/usr/bin/foo`** is a program that outputs **`dad`** what is the output on your screen of this shell command sequence:

```
PATH=/bin/foo:/usr/bin/foo:/usr ; foo
```

   a. `dad`
   b. `bash: foo: command not found`
   c. **`mom`** followed by **`dad`**
   d. **`dad`** followed by **`mom`**
   e. `mom`

134. What is the shell output on your screen of this two-command sequence:

```
cd /home/alleni || echo "In $(pwd)"
```

   a. `"In $(pwd)"`
   b. `In /home/alleni`
   c. `In $(pwd)`
   d. no output
   e. `In 0pwd)`

135. In an empty directory, what appears on your screen after this command line?

```
ls 2>/dev/null nosuchfile
```

   a. `nosuchfile`
   b. `ls: 2>/dev/null nosuchfile: No such file or directory`
   c. `ls: /dev/null: No such file or directory`
   d. no output
   e. `ls: nosuchfile: No such file or directory`

136. What is true about this output from **`ls -il foo bar`**

```
15 -r-x-----x 2 bin  bin  3 Oct 30 09:23 foo
15 -r-x-----x 2 bin  bin  3 Oct 30 09:23 bar
```

   a. this output is not possible
   b. **`foo`** and **`bar`** are names for the same file
   c. **`foo`** and **`bar`** are names for different files
   d. **`foo`** and **`bar`** are two of three names for this file
   e. **`foo`** and **`bar`** each have three names (six names total)

137. Which command sequence correctly compares the numbers and prints **`OK`**?
   a. `if [ 1 -lt 2 ] ; then echo OK ; fi`
   b. `if ( 1 let 2 ) ; then echo OK ; fi`
   c. `if ( let 2 > 1 ) ; then echo OK ; fi`
   d. `if [ ! 2 < 1 ] ; then echo OK ; fi`
   e. `if [ 2 > 1 ] ; then echo OK ; fi`

138. If the file **`bat`** contained the word **`foo`**, what would be the output on your screen of this two command sequence:

```
PATH=/bin/ls:/bin/who:/etc/passwd ; /bin/ls bat
```

   a. `/bin/ls: bat: No such file or directory`
   b. no output
   c. `bash: /bin/ls: command not found`
   d. `bat`
   e. `foo`

139. What is the output on your screen of the following sequence of commands:

```
i=00 ; [ $i = 0 ] ; echo $?
```

   a. `test: $i: integer expression expected`
   b. the number 0 or 1 followed by another 0 or 1 on a new line
   c. no output
   d. `1`
   e. `0`

140. In an empty directory, what is the output on your screen of these commands:

```
      touch uu .u uv .v uw ; a="*u *v" ; echo "$a"
```

a. `$a`
b. `uu .u uv .v`
c. `uu uv`
d. `*u *v`
e. `u* v*`

141. If `foo` were a file of text containing 50 different lines, what would be the output on your screen of this exact command line: `diff foo foo`

a. several lines, which are the lines that are different between the two files
b. the contents of file `foo` would be displayed
c. an error message because `diff` doesn't allow the same file name twice
d. an error message because `diff` only allows one file name
e. no output

142. What is the output on your screen of this two command sequence:

```
      PATH=/bin/cat:/bin/sh:/bin/ls ; ls nosuchfile
```

a. `ls: nosuchfile: No such file or directory`
b. `bash: ls: command not found`
c. `ls: /bin/ls: command not found`
d. `bash: /bin/sh: No such file or directory`
e. `bash: /bin/ls: command not found`

143. A shell script named `bar` is executed as follows:

```
      ./bar "a b" "c d e" f
```

Inside the script is the line: `echo "$2"`
What is the output on your screen from this line?

a. `a b`
b. `b`
c. `b"`
d. `$2`
e. `c d e`

144. What is the output on your screen of the following command sequence:

```
      echo wc >wc ; wc wc >wc ; head wc
```

a. `1 1 3 wc`
b. no output
c. `wc`
d. `1 1 2 wc`
e. `0 0 0 wc`

145. If `foo` is an executable script containing the line:

```
      PATH=/bin ; export PATH
```

what is the output on your screen of the following sequence of commands:

```
      PATH=/etc ; ./foo ; echo "$PATH"
```

a. `/etc:/bin`
b. `/etc`
c. `foo`
d. `$PATH`
e. `/bin`

146. Which command line below allows programs in the current directory to execute without preceding the names with `./`?

a. `PATH=.:/bin:$HOME`
b. `PATH=./$HOME:./bin`
c. `PATH=/bin/.:$HOME/.`
d. `$PATH=./bin:./$HOME`
e. `$PATH=$HOME:.:/usr/bin`

147. Which of the following `bash PATH` statements makes the most sense?

a. `PATH=/bin:/bin/cat:/usr/bin`
b. `PATH=/bin:/usr/bin:/etc/passwd`
c. `PATH=/bin/ls:/etc:/usr/bin`
d. `PATH=/bin:/usr/bin:/etc`
e. `PATH=/bin/sh:/usr/bin:/etc:/bin`

148. In a directory containing one file named `dog`, what appears on your screen after this command line? `1>/dev/null ls *`

a. `dog`
b. `ls: *: No such file or directory`
c. `bash: 1>/dev/null: command not found`
d. `*`
e. no output on screen

149. If the file `bat` contained the word `foo`, what would be the output on your screen of this two command sequence:

```
      PATH=/bin/cat:/bin/who:/bin/ls ; cat bat
```

a. `cat: bat: No such file or directory`
b. `bat`
c. `bash: cat: command not found`
d. `foo`
e. no output on screen

150. What is the link count of file `f` after this set of successful commands?

```
rm f ; touch f ; cp f x
ln f a ; ln x y ; ln a z ; ln x b
```

a. 6
b. 3
c. 4
d. 5
e. 2

151. What is the output on your screen of the following command sequence:

```
f=1 ; touch f ; test ! -z $f ; echo $?
```

a. **`0`**
b. **`1`**
c. no output
d. the number 1 or 0 followed by another 1 or 0 on a new line
e. **`test: $f: integer expression expected`**

152. If **`a=1`** and **`b=1`**, which command sequence correctly compares the two numbers as equal and prints **`OK`**?

a. **`if test a -eq b ; then echo OK ; fi`**
b. **`if ( a == b ) ; then echo OK ; fi`**
c. **`if [ a = b ] ; then echo OK ; fi`**
d. **`if [ $a -eq $b ] ; then echo OK ; fi`**
e. **`if [ $a==$b ] ; then echo OK ; fi`**

153. What minimal permissions must you have on a directory to be able to execute successfully the command **`ls .`** from *inside* the directory?

a. **`-wx`**
b. **`rw-`**
c. **`r-x`**
d. **`r--`**
e. **`--x`**

154. Which command line shows the file in **`/bin`** with the largest checksum?

a. **`ls /bin/* | sum | sort -nr | head -1`**
b. **`cat /bin/* | sum | sort -nr | head -1`**
c. **`sum /bin/* | sort -nr | head -1`**
d. **`sum /bin | sort -nr | head -1`**
e. **`cat /bin | sum | sort -nr | head -1`**

155. Which command line shows the current date?

a. **`date | bash`**
b. **`bash date`**
c. **`echo date | bash`**
d. **`bash >date ; cat date`**
e. **`bash <date`**

156. How many arguments are passed to the command by the shell on this command line: **`<bar bar -b "-a" ’-r’ >bar bar bar`**

a. **`6`**
b. **`3`**
c. **`2`**
d. **`4`**
e. **`5`**

157. What is the output on your screen if a user signals an end-of-file from the keyboard during this command sequence? **`read input && echo $?`**

a. an error message
b. **`1`**
c. no output on screen
d. **`0`**
e. **`$?`**

Answer Key - CST 8129 − Ian Allen − Fall 2005 - CST 8129 Practice Test

1. b
2. a
3. a
4. a
5. e
6. b
7. c
8. c
9. a
10. c
11. c
12. b
13. a
14. d
15. a
16. d
17. b
18. a
19. b
20. b
21. e
22. d
23. d
24. a
25. a
26. e
27. d
28. e
29. c
30. a
31. e
32. a
33. d
34. e
35. d
36. e
37. e
38. d
39. b
40. e
41. e
42. d
43. a
44. a
45. d
46. c
47. d
48. d
49. a
50. b
51. c
52. b
53. b
54. d
55. d
56. a
57. c
58. b
59. e
60. e
61. a
62. b
63. e
64. e
65. e
66. d
67. e
68. c
69. e
70. c
71. a
72. a
73. b
74. a
75. e
76. c
77. e
78. a
79. d
80. a
81. d
82. b
83. c
84. c
85. e
86. a
87. b
88. b
89. a
90. c
91. c
92. e
93. b
94. e
95. a
96. d

97. b
98. c
99. c
100. e
101. d
102. e
103. b
104. e
105. c
106. b
107. c
108. c
109. d
110. d
111. a
112. a
113. b
114. d
115. b
116. a
117. a
118. a
119. e
120. e
121. a
122. d
123. a
124. a
125. a
126. e
127. b
128. a
129. e
130. d
131. a
132. a
133. b
134. d
135. d
136. b
137. a
138. d
139. d
140. d
141. e
142. b
143. e
144. e
145. b
146. a
147. d
148. e
149. c
150. b
151. a
152. d
153. c
154. c
155. c
156. e
157. c

```
Count of a:  39  25%
Count of b:  28  18%
Count of c:  25  16%
Count of d:  31  20%
Count of e:  34  22%

With 5 choices: 157

Macro .cmd split no indent: 3
Macro .cmd split with indent: 78
```