

Suppose in folder Files

1.1a

sed 's/[[:punct:]]//g' rime.txt

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ sed 's/[[:punct:]]//g' rime.txt
[THE RIME OF THE ANCIENT MARINER IN SEVEN PARTS

BY SAMUEL TAYLOR COLERIDGE

PART THE FIRST

It is an ancient Mariner
And he stoppeth one of three
By thy long grey beard and glittering eye
Now wherefore stoppst thou me

The Bridegrooms doors are opened wide
And I am next of kin
The guests are met the feast is set
Mayst hear the merry din

He holds him with his skinny hand
There was a ship quoth he
Hold off unhand me greybeard loon
Eftsoons his hand dropt he

He holds him with his glittering eye
The WeddingGuest stood still
And listens like a three years child
The Mariner hath his will

The WeddingGuest sat on a stone
He cannot chuse but hear
And thus spake on that ancient man
The brighteyed Mariner

The ship was cheered the harbour cleared
Merrily did we drop
Below the kirk below the hill
Below the lighthouse top

The Sun came up upon the left
Out of the sea came he
And he shone bright and on the right
Went down into the sea

Higher and higher every day
Till over the mast at noon
The WeddingGuest here beat his breast
For he heard the loud bassoon

The bride hath paced into the hall
Red as a rose is she
Nodding their heads before her goes
The merry minstrelsy
```

1.1b

sed 's/ / /g' rime.txt

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ sed 's/ / /g' rime.txt  
THE RIME OF THE ANCIENT MARINER IN SEVEN PARTS
```

```
BY SAMUEL TAYLOR COLERIDGE
```

```
PART THE FIRST.
```

```
It is an ancient Mariner,  
And he stoppeth one of three.  
"By thy long grey beard and glittering eye,  
Now wherefore stopp'st thou me?
```

```
"The Bridegroom's doors are opened wide,  
And I am next of kin;  
The guests are met, the feast is set:  
May'st hear the merry din."
```

```
He holds him with his skinny hand,  
"There was a ship," quoth he.  
"Hold off! unhand me, grey-beard loon!"  
Eftsoons his hand dropt he.
```

```
He holds him with his glittering eye--  
The Wedding-Guest stood still,  
And listens like a three years child:  
The Mariner hath his will.
```

```
The Wedding-Guest sat on a stone:  
He cannot chuse but hear;  
And thus spake on that ancient man,  
The bright-eyed Mariner.
```

```
The ship was cheered, the harbour cleared,  
Merrily did we drop  
Below the kirk, below the hill,  
Below the light-house top.
```

```
The Sun came up upon the left,  
Out of the sea came he!  
And he shone bright, and on the right  
Went down into the sea.
```

```
Higher and higher every day,  
Till over the mast at noon--  
The Wedding-Guest here beat his breast,  
For he heard the loud bassoon.
```

```
The bride hath paced into the hall,  
Red as a rose is she;
```

1.1c

sed -e 's/ / /g' rime.txt | sed 's/^/ /g'

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ sed -e 's/ / /g' rime.txt | sed 's/^/ /g'
```

THE RIME OF THE ANCIENT MARINER IN SEVEN PARTS

BY SAMUEL TAYLOR COLERIDGE

PART THE FIRST.

It is an ancient Mariner,
And he stoppeth one of three.
"By thy long grey beard and glittering eye,
Now wherefore stopp'st thou me?"

"The Bridegroom's doors are opened wide,
And I am next of kin;
The guests are met, the feast is set:
May'st hear the merry din."

He holds him with his skinny hand,
"There was a ship," quoth he.
"Hold off! unhand me, grey-beard loon!"
Eftsoons his hand dropt he.

He holds him with his glittering eye--
The Wedding-Guest stood still,
And listens like a three years child:
The Mariner hath his will.

The Wedding-Guest sat on a stone:
He cannot chuse but hear;
And thus spake on that ancient man,
The bright-eyed Mariner.

The ship was cheered, the harbour cleared,
Merrily did we drop
Below the kirk, below the hill,
Below the light-house top.

The Sun came up upon the left,
Out of the sea came he!
And he shone bright, and on the right
Went down into the sea.

Higher and higher every day,

1.1d

sed 's/[[:alpha:]]/(&)/g' rime.txt | sed 's/)/(//g'

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ sed 's/[[:alpha:]]/(&)/g' rime.txt | sed 's/)/(//g'
(THE) (RIME) (OF) (THE) (ANCIENT) (MARINER) (IN) (SEVEN) (PARTS)
```

(BY) (SAMUEL) (TAYLOR) (COLERIDGE)

(PART) (THE) (FIRST).

(It) (is) (an) (ancient) (Mariner),
(And) (he) (stoppeth) (one) (of) (three).
"(By) (thy) (long) (grey) (beard) (and) (glittering) (eye),
(Now) (wherefore) (stopp)'(st) (thou) (me)?

"(The) (Bridegroom)'(s) (doors) (are) (opened) (wide),
(And) (I) (am) (next) (of) (kin);
(The) (guests) (are) (met), (the) (feast) (is) (set):
(May)'(st) (hear) (the) (merry) (din)."

(He) (holds) (him) (with) (his) (skinny) (hand),
"(There) (was) (a) (ship)," (quoth) (he).
"(Hold) (off)! (unhand) (me), (grey)-(beard) (loon)!"
(Eftsoons) (his) (hand) (dropt) (he).

(He) (holds) (him) (with) (his) (glittering) (eye)--
(The) (Wedding)-(Guest) (stood) (still),
(And) (listens) (like) (a) (three) (years) (child):
(The) (Mariner) (hath) (his) (will).

(The) (Wedding)-(Guest) (sat) (on) (a) (stone):
(He) (cannot) (chuse) (but) (hear);
(And) (thus) (spake) (on) (that) (ancient) (man),
(The) (bright)-(eyed) (Mariner).

(The) (ship) (was) (cheered), (the) (harbour) (cleared),
(Merrily) (did) (we) (drop)
(Below) (the) (kirk), (below) (the) (hill),
(Below) (the) (light)-(house) (top).

(The) (Sun) (came) (up) (upon) (the) (left),
(Out) (of) (the) (sea) (came) (he)!
(And) (he) (shone) (bright), (and) (on) (the) (right)
(Went) (down) (into) (the) (sea).

(Higher) (and) (higher) (every) (day),
(Till) (over) (the) (mast) (at) (noon)--
(The) (Wedding)-(Guest) (here) (beat) (his) (breast),
(For) (he) (heard) (the) (loud) (bassoon).

1.1e

sed 's/[[:alpha:]]/(&)/g' rime.txt | sed 's/)/(//g'|sed 's/ //g'

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ sed 's/[[:alpha:]]/(&)/g' rime.txt | sed 's/)/(//g'|sed 's/ //g'
(TH)(E)(RIM)(E)(OF)(TH)(E)(ANCIENT)(MARINER)(IN)(SEVEN)(PARTS)
```

```
(BY)(SAMUEL)(TAYLOR)(COLERIDGE)
```

```
(PART)(THE)(FIRST).
```

```
(It)(is)(an)(ancient)(Mariner),
(And)(he)(stoppeth)(one)(of)(three).
"(By)(thy)(long)(grey)(beard)(and)(glittering)(eye),
(Now)(wherefore)(stopp)'(st)(thou)(me)?
```

```
"(The)(Bridegroom)'(s)(doors)(are)(opened)(wide),
(And)(I)(am)(next)(of)(kin);
(The)(guests)(are)(met),(the)(feast)(is)(set):
(May)'(st)(hear)(the)(merry)(din)."
```

```
(He)(holds)(him)(with)(his)(skinny)(hand),
"(There)(was)(a)(ship),"(quoth)(he).
"(Hold)(off)!(unhand)(me),(grey)-(beard)(loon)!"
(Eftsoons)(his)(hand)(dropt)(he).
```

```
(He)(holds)(him)(with)(his)(glittering)(eye)--
(The)(Wedding)-(Guest)(stood)(still),
(And)(listens)(like)(a)(three)(years)(child):
(The)(Mariner)(hath)(his)(will).
```

```
(The)(Wedding)-(Guest)(sat)(on)(a)(stone):
(He)(cannot)(chuse)(but)(hear);
(And)(thus)(spake)(on)(that)(ancient)(man),
(The)(bright)-(eyed)(Mariner).
```

```
(The)(ship)(was)(cheered),(the)(harbour)(cleared),
(Merrily)(did)(we)(drop)
(Below)(the)(kirk),(below)(the)(hill),
(Below)(the)(light)-(house)(top).
```

```
(The)(Sun)(came)(up)(upon)(the)(left),
(Out)(of)(the)(sea)(came)(he)!
(And)(he)(shone)(bright),(and)(on)(the)(right)
(Went)(down)(into)(the)(sea).
```

```
(Higher)(and)(higher)(every)(day),
(Till)(over)(the)(mast)(at)(noon)--
(The)(Wedding)-(Guest)(here)(beat)(his)(breast),
(For)(he)(heard)(the)(loud)(bassoon).
```

1.2a

sed -n '/-[0-9]/p' inteff.csv

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ sed -n '/-[0-9]/p' inteff.csv
SE,ssws,1534.1,3005.86,1328.04,4333.88,-0.302,0
SE,sssb,23375.7,3869.44,2510.24,6379.69,-0.303,1
SE,sswb,270.6,1341.25,1807.93,3149.18,-0.323,0
SE,wssb,45576,6630.44,2313.1,8943.54,-0.268,1
SE,wsbw,16267.2,3346.4,1911.01,5257.42,-0.295,1
SE,sbwb,13380.7,4008.27,1829.7,5838,-0.223,1
GE2,holfes,3.44800000,0.94389440,0.32931090,1.27320500,-0.04908214,1
GE2,holbri,3.58000000,1.06942240,0.20902390,1.27844600,-0.06127105,1
GE2,holpru,3.96900000,1.04140180,0.24036810,1.28177000,-0.05896012,1
GE2,hollys,6.77100000,1.29716000,0.24980690,1.54696700,-0.04933826,1
GE2,fesbri,4.18400000,0.87293190,0.32144040,1.19437200,-0.02448218,1
GE2,feslych,4.05400000,0.75235450,0.50803070,1.26038500,-0.00280154,1
GE2,feslys,6.47100000,1.09645930,0.36436900,1.46082800,-0.00995637,1
GE2,lychpru,3.29800000,0.79997200,0.37706370,1.17703600,-0.02814007,1
GE2,lychlys,4.63700000,1.07299120,0.37218990,1.44518100,-0.01427926,1
GE2,prulys,4.72400000,1.08236950,0.30288570,1.38525500,-0.02171010,1
GE2,hollych,1.89800000,0.87810650,0.37898740,1.25709400,-0.05125533,0
GE2,fespru,1.65600000,0.83373310,0.32355830,1.15729100,-0.03105034,0
GE2,brilych,2.25500000,0.85175450,0.31870530,1.17046000,-0.03255674,0
GE2,bripru,-1.74800000,0.88951030,0.16075050,1.05026100,-0.05981855,0
GE2,brilys,1.58200000,1.09050890,0.24496600,1.33547500,-0.04070531,0
```

1.2b

```
sed '/[a-z]\{5,\}/d' inteff.csv
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ sed '/[a-z]\{5,\}/d' inteff.csv
SE,ssws,1534.1,3005.86,1328.04,4333.88,-0.302,0
SE,sssb,23375.7,3869.44,2510.24,6379.69,-0.303,1
SE,sswb,270.6,1341.25,1807.93,3149.18,-0.323,0
SE,wssb,45576,6630.44,2313.1,8943.54,-0.268,1
SE,wsbw,16267.2,3346.4,1911.01,5257.42,-0.295,1
SE,sbw,13380.7,4008.27,1829.7,5838,-0.223,1
```

1.2c

```
sed 's/./\L&/g' inteff.csv > inteff2.csv
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ gsed 's/./\L&/g' inteff.csv > inteff2.csv
Yunfeis-Mac-Pro:Files yunfeiguo$
```

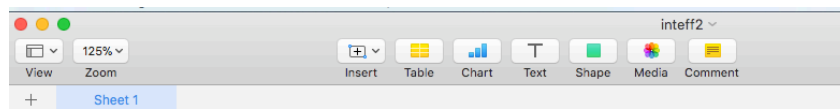


Table 1

experiment	mixture	int	sel	compl	net	oi	signif
ge1	plpru	5.74	0.35	0.87	1.22	1.05	1
ge1	plach	3.5	0.29	0.49	0.78	0.99	1
ge1	plagr	4.01	0.16	1.02	1.19	1.04	1
ge1	pruach	1.7	0.49	1.11	0.59	0.9	0
ge1	pruagr	3.53	0.28	0.7	0.99	0.96	1
ge1	achagr	0.91	0.17	0.34	0.51	0.93	0
se	ssws	1534.1	3005.86	1328.04	4333.88	-0.302	0
se	sssb	23375.7	3869.44	2510.24	6379.69	-0.303	1
se	sswb	270.6	1341.25	1807.93	3149.18	-0.323	0
se	wssb	45576	6630.44	2313.1	8943.54	-0.268	1
se	wsbw	16267.2	3346.4	1911.01	5257.42	-0.295	1
se	sbw	13380.7	4008.27	1829.7	5838	-0.223	1
ge2	hofes	3.448	0.9438944	0.3293109	1.273205	-0.04908214	1
ge2	holbri	3.58	1.0694224	0.2090239	1.278446	-0.06127105	1
ge2	holpru	3.969	1.0414018	0.2403681	1.28177	-0.05896012	1
ge2	hollys	6.771	1.29716	0.2498069	1.546967	-0.04933826	1
ge2	fesbri	4.184	0.8729319	0.3214404	1.194372	-0.02448218	1
ge2	feslych	4.054	0.7523545	0.5080307	1.260385	-0.00280154	1
ge2	feslys	6.471	1.0964593	0.364369	1.460828	-0.00995637	1
ge2	lychpru	3.298	0.799972	0.3770637	1.177036	-0.02814007	1
ge2	lychlys	4.637	1.0729912	0.3721899	1.445181	-0.01427926	1
ge2	pruly	4.724	1.0823695	0.3028857	1.385255	-0.0217101	1
ge2	hollych	1.898	0.8781065	0.3789874	1.257094	-0.05125533	0
ge2	fespru	1.656	0.8337331	0.3235583	1.157291	-0.03105034	0
ge2	brilych	2.255	0.8517545	0.3187053	1.17046	-0.03255674	0
ge2	bripru	-1.748	0.8895103	0.1607505	1.050261	-0.05981855	0
ge2	brily	1.582	1.0905089	0.244966	1.335475	-0.04070531	0

2.1a

```
wc -l -w -m alice
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ wc -l -w -m alice
  3601   26826  148233 alice
Yunfeis-Mac-Pro:Files yunfeiguo$ `
```

2.1b

```
cat Alice | tr -cd "[:alpha:]" | wc -m
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ cat Alice | tr -cd "[:alpha:]" | wc -m
 107690
Yunfeis-Mac-Pro:Files yunfeiguo$
```

2.1c

```
cat Alice | tr -d "[:alpha:]" | wc -m
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ cat Alice | tr -d "[:alpha:]" | wc -m
  40543
```

2.1d

```
a=$(cat Alice|tr -cd ' ' | wc -m)
b=$(cat Alice|tr -d ' ' | wc -m)
echo "scale=10;$a/$b" | bc
```

```
Yunfeis-Mac-Pro:Files yunfeiguo$ a=$(cat Alice|tr -cd ' ' | wc -m)
Yunfeis-Mac-Pro:Files yunfeiguo$ b=$(cat Alice|tr -d ' ' | wc -m)
Yunfeis-Mac-Pro:Files yunfeiguo$ echo "scale=10;$a/$b" | bc
.2463991120
Yunfeis-Mac-Pro:Files yunfeiguo$
```


3.1a

```
cat country.txt | tail -1 | cut -d "," -f1
```

```
[Yunfeis-Mac-Pro:Files yunfeiguos$ cat country.txt| tail -1| cut -d "," -f1  
'UMI'
```

3.1b

```
cut -d " " -f4 country.txt > temp; sort temp|head -1
```

```
[Yunfeis-Mac-Pro:Files yunfeiguos$ gcut -d '"' -f4 country.txt > temp; sort temp|head -1  
Afghanistan
```

3.1c

```
min=$(cat country.txt | sort -nt", " -k7 > temp; cat temp | cut -d " , " -f7 | head -1)
a=$(cut -d " , " -f7 country.txt >temp; sort -n temp | grep -c "^$min$")
cat country.txt | sort -nt", " -k7 > temp
cut -d " , " -f1 temp | head -$a
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ cat country.txt | gsort -nt"," -k7 > temp
Yunfeis-Mac-Pro:Files yunfeiguo$ gcut -d "," -f1 temp| head -5a
'ATA'
'ATF'
'BVT'
'HMD'
'IOT'
'SGS'
'UMI'
Yunfeis-Mac-Pro:Files yunfeiguo$
```

3.2a

```
cut -c32-35 japan.txt>temp; sort temp
```

```
yunfeis-Mac-Pro:Files yunfeiguos$ gcut -c32-35 japan.txt>temp; sort temp
baba
baba
babi
babi
babi
babo
babo
bada
bade
bade
badi
badi
badi
bado
bado
bado
badu
badu
baha
baha
bahi
baho
bahu
bahu
baka
baka
bake
bake
bake
baki
bako
bako
bako
bama
bama
bama
bama
bama
```

3.2b

```
cut -c32-35 japan.txt>temp; sort temp| uniq | wc -l
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ gcut -c32-35 japan.txt>temp; sort temp| uniq | wc -l
2442
```

3.2c

```
cut -c1-6 japan.txt>temp; cat temp|tr -d '\n'|sed 's/[[:alpha:]]/&\n/g'|sort|uniq|wc -l
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ gcut -c1-6 japan.txt>temp; cat temp|tr -d '\n'|gsed 's/[[:alpha:]]/&\n/g'|sort|uniq|wc -l
16
Yunfeis-Mac-Pro:Files yunfeiguo$
```

3.2d

```
awk '{for(i=1;i<=6;i++)print $i}' japan.txt| grep '^h.*$'|wc -l
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ awk '{for(i=1;i<=6;i++)print $i}' japan.txt| grep '^h.*$'|wc -l
1097
```

3.3a

```
cut -d ' ' -f1 weblog| sort| uniq| wc -l
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ gcut -d ' ' -f1 weblog| sort| uniq| wc -l
123
```

3.3b

```
cut -d '"' -f2 weblog| cut -d ' ' -f2| grep '/.\?dwills/'| wc -l
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ cut -d '"' -f2 weblog| cut -d ' ' -f2| grep '/.\?dwills/'| wc -l
59
```

3.3c

```
cat weblog|grep '/.\?dwills/'| cut -d ' ' -f1| sort | uniq| wc -l
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ cat weblog|grep '/.\?dwills/'| cut -d ' ' -f1| sort | uniq| wc -l
20
```

3.3d

```
grep -v 'GET' weblog | cut -d ' ' -f6| tr -d '"'| uniq
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ grep -v 'GET' weblog | cut -d ' ' -f6| tr -d '"'| uniq;
POST
Yunfeis-Mac-Pro:Files yunfeiguo$
```

```
grep -v 'GET' weblog | cut -d ' ' -f1| wc -l
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ grep -v 'GET' weblog | cut -d ' ' -f1| wc -l
6
```

3.3e

```
cat weblog| cut -d ' ' -f10| sort -n| tail -1
```

```
[Yunfeis-Mac-Pro:Files yunfeiguos cat weblog| cut -d ' ' -f10| sort -n| tail -1  
4033024
```

3.3f

```
cat weblog| cut -d ' ' -f7,10| sort -k2 -n| tail -1| cut -d ' ' -f1|  
sed 's/[/]/\n/g'|tail -1
```

```
[Yunfeis-Mac-Pro:Files yunfeiguos cat weblog| cut -d ' ' -f7,10| sort -k2 -n| tail -1| cut -d ' ' -f1|sed 's/[/]/\n/g'|tail -1  
08.ppt
```

4.1a

```
awk '$5<5000' cars_file.txt
```

```
[Yunfeis-Mac-Pro:Files yunfeiguos awk '$5<5000' cars_file.txt  
plym      fury      77      73      2500  
chevy     nova      79      60      3000  
chevy     nova      80      50      3500  
fiat      600      65      115      450  
toyota    tercel    82      180      750  
chevy     impala    65      85      1550  
Yunfeis-Mac-Pro:Files yunfeiguos
```

4.1b

```
awk '$5<=9000 && $5>=2000' cars_file.txt
```

```
[Yunfeis-Mac-Pro:Files yunfeiguos awk '$5<=9000 && $5>=2000' cars_file.txt  
plym      fury      77      73      2500  
chevy     nova      79      60      3000  
chevy     nova      80      50      3500  
honda     accord    81      30      6000  
Yunfeis-Mac-Pro:Files yunfeiguos
```

4.1c

```
awk '$3==83 && $4>=20' cars_file.txt
```

```
[Yunfeis-Mac-Pro:Files yunfeiguos awk '$3==83 && $4>=20' cars_file.txt  
ford      bronco    83      25      9500  
Yunfeis-Mac-Pro:Files yunfeiguos
```

4.1d

```
awk '$3>=80 && $3<=89' cars_file.txt
```

```
[Yunfeis-Mac-Pro:Files yunfeiguos awk '$3>=80 && $3<=89' cars_file.txt  
ford      ltd      83      15      10500  
chevy     nova      80      50      3500  
honda     accord    81      30      6000  
porsche   carrera  85      40      20000  
ford      thundb    84      10      17000  
toyota    tercel    82      180      750  
ford      bronco    83      25      9500  
Yunfeis-Mac-Pro:Files yunfeiguos
```

4.1e

```
awk '{print $1,$5}' cars_file.txt
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ awk '{print $1,$5}' cars_file.txt
plym 2500
chevy 3000
ford 10000
volvo 9850
ford 10500
chevy 3500
fiat 450
honda 6000
porsche 20000
ford 17000
toyota 750
chevy 1550
ford 9500
Yunfeis-Mac-Pro:Files yunfeiguo$ █
```

4.1f

```
awk '$1=="chevy" && $2=="nova" {print $5}' cars_file.txt
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ awk '$1=="chevy" && $2=="nova" {print $5}' cars_file.txt
3000
3500
█
```

4.1g

```
awk '{print $1}' cars_file.txt| sort| uniq -c
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ awk '{print $1}' cars_file.txt| sort| uniq -c
  3 chevy
  1 fiat
  4 ford
  1 honda
  1 plym
  1 porsche
  1 toyota
  1 volvo
█
```

4.1h

Avg:

```
sum=$(awk '{sum+=$5} END {print sum}' cars_file.txt)
count=$(cat cars_file.txt|wc -l)
echo "scale=10;$sum/$count"| bc
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ awk '{sum+=$5} END {print sum}' cars_file.txt
94600
[Yunfeis-Mac-Pro:Files yunfeiguo$ sum=$(awk '{sum+=$5} END {print sum}' cars_file.txt)
[Yunfeis-Mac-Pro:Files yunfeiguo$ echo $sum
94600
[Yunfeis-Mac-Pro:Files yunfeiguo$ count=$(cat cars_file.txt|wc -l)
[Yunfeis-Mac-Pro:Files yunfeiguo$ echo $count
13
[Yunfeis-Mac-Pro:Files yunfeiguo$ echo "scale=10;$sum/$count"| bc
7276.9230769230
Yunfeis-Mac-Pro:Files yunfeiguo$ █
```

Min:

```
awk '{print $5}' cars_file.txt | sort -n| head -1
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ awk '{print $5}' cars_file.txt | sort -n| head -1
450
-
```

Max:

```
awk '{print $5}' cars_file.txt | sort -n| tail -1
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ awk '{print $5}' cars_file.txt | sort -n| tail -1
20000
-
```

4.2a

```
awk '$6=="baba"' japan.txt
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ awk '$6=="baba"' japan.txt
henohe  99    643  0.36  u   baba
sakoto  84   5307  0.02  e   baba
```

4.2b

```
cat japan.txt|grep "ba"|awk '$2==62'
```

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ cat japan.txt|grep "ba"|awk '$2==62'
dupoku  62  16703  0.54  u   baka
hobaso  62   6710  0.01  e   bera
desire  62  23785   0.2  c   bare
peseda  62   4182  0.79  h   bake
badeko  62   5098  0.35  o   zina
```

4.2c

awk '\$3<100 && \$5>="d" && \$5<="m"' japan.txt

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ awk '$3<100 && $5>="d" && $5<="m"' japan.txt
benuda    1      1    0.6   j    hezu
ruhipe    70     80   0.19  m    moke
bakipi    51     68   0.4    k    robo
zetuda    26     57   0.45  k    kedo
pamome    41     80   0.32  f    hibo
bimipu    75     37   0.94  m    ripe
```

4.2d

awk '\$2>\$3' japan.txt

```
[Yunfeis-Mac-Pro:Files yunfeiguo$ awk '$2>$3' japan.txt
rekobu    93     22   0.94   s    zuti
neboke    53     26   0.56   y    raka
kapeka    84     38   0.55   b    nase
pamipo    82     36   0.01   t    rato
pomete    91     73   0.29   x    boha
hedemo    70     10   0.33   w    bumo
bimipu    75     37   0.94   m    ripe
podasa    74     35   0.71   y    peme
bisiti    76     62   0.47   z    dero
```

4.2d

awk 'NR%100==0' japan.txt

[Yunfeis-Mac-Pro:Files yunfeiguo\$ awk 'NR%100==0' japan.txt

kanahu	28	9477	0.64	u	mobe
nahibe	7	13715	0.38	m	topo
daride	80	28797	0.65	r	meka
bororu	2	29978	0.81	s	hude
mebiba	39	29279	0.11	a	nuni
dokoni	26	7242	0.06	h	dohu
zinuka	50	23329	0.21	g	koti
zabaru	3	2931	0.94	y	dipo
zeposu	56	2453	0.88	d	daki
boruso	27	6993	0.14	w	behi
pisido	86	20415	0.85	y	meku
dabome	42	25674	0.37	s	suke
tapahu	82	29411	0.64	u	rira
benuda	1	1	0.6	j	hezu
desize	71	4057	0.32	e	manu
zapupi	49	10737	0.97	s	miri
pituro	69	14942	0.88	y	nedo
rehide	92	23813	0.52	u	dase
pezobo	6	21016	0.62	q	hime
zazati	76	20743	0.71	s	rota
tadubi	22	17066	0.69	c	rade
bimota	53	7141	0.46	z	kede
nobizo	20	23287	0.29	a	nira
tibeso	10	3546	0.67	i	zoba
mumeso	96	12745	0.81	v	pitu
zukeke	48	5289	0	r	siba
komiti	40	27006	0.68	s	hina
nebuku	50	6824	0.5	k	dodo
tiruno	84	10993	0.43	l	pabu
rapapi	60	2098	0.69	d	nupo
demora	25	4867	0.39	w	niso
tinezu	78	4940	0.75	f	kere
ditamo	21	12086	0.29	q	medo
morebu	92	23772	0.95	r	zoru
heruhe	67	17923	0.49	y	kute
ripuru	70	30274	0.08	y	zida
padehu	17	27501	0.73	x	pize
hatupu	41	6834	0.68	y	time
hakomi	83	13182	0.95	s	romi
niruno	36	22197	0.7	s	zaho
dahane	79	11903	0.95	d	pasi
pabemo	74	29888	0.43	x	duti
tunuso	31	3809	0.54	p	susi
zihumu	4	2191	0.34	f	hana
pekoru	24	6442	0.14	k	tiru
subipi	46	3281	0.86	a	huzo
kazamu	21	5235	0.29	g	doho
punepi	82	18220	0.82	e	zite
tozanu	67	10049	0.61	n	mita
pusebi	84	8676	0.72	k	depu

Yunfeis-Mac-Pro:Files yunfeiguo\$

5.1

```
cat alice|tr -d "\n"|sed 's/\./\n/g'|sed 's/\?/\n/g'|sed 's/\!/\n/g'|  
awk '{print length, $0}'|sort -nr|head -1
```

```
Yunfeis-Mac-Pro:Files yunfeiguos$ cat alice|tr -d "\n"|gsed 's/\./\n/g'|gsed 's/\?/\n/g'|gsed 's/\!/\n/g'|  
/\n/g'|awk '{print length, $0}'|sort -nr|head -1  
906   Hardly knowing what she did, she picked up a little bit of stick, and held it out to the puppy;  
y; whereupon the puppy jumped into the air off all its feet at once, with a yelp of delight, and rushed  
hed at the stick, and made believe to worry it; then Alice dodged behind a great thistle, to keep herself  
erself from being run over; and the moment she appeared on the other side, the puppy made another rush  
sh at the stick, and tumbled head over heels in its hurry to get hold of it; then Alice, thinking it  
t was very like having a game of play with a cart horse, and expecting every moment to be trampled under  
nder its feet, ran round the thistle again; then the puppy began a series of short charges at the stick,  
ick, running a very little way forwards each time and a long way back, and barking hoarsely all the  
while, till at last it sat down a good way off, panting, with its tongue hanging out of its mouth,  
and its great eyes half shut
```

5.2

```
cat alice|tr -cd '[:alpha:][:space:]'|sed 's/ /\n/g'|sed '/^$/d'|sort|  
uniq -ic|sort -nr|head -5
```

```
Yunfeis-Mac-Pro:Files yunfeiguos$ cat alice|tr -cd '[:alpha:][:space:]'|gsed 's/ /\n/g'|gsed '/^$/d'|sort|uni  
-ic|sort -nr|head -5  
1525 the  
802 and  
725 to  
615 a  
502 she
```