1.

POSIX Basic Vs. Extended Regular Expressions，   perl

POSIX basic   BRE） -- grep

POSIX Basic Vs. Extended Regular Expressions   ERE） -- egrep   , grep -E

1.1 BRE

ERE BRE

```
^ $ . [ ] *
```

\

1.1.1

```
$ echo "haha [i889" | grep "\[i"      #       \/          [
haha [i889
$ echo "haha [i889^" | grep  "\^"    #       ^
haha [i889^



$ echo "haha [i889" | grep "\[i8*"      #             8
haha [i889


$ echo "hahai" | grep "\(ha\)i"      #                                          \
hahai

$ echo "hahai" | grep "\(ha\)\+i"    #      +                                \
hahai

$ echo "(hahai" | grep "(ha"
(hahai


##   ERE  BRE       \d                                       [0-9]                        [a-zA-Z]

#
$ echo "hahai89" | grep "hai[0-9]"
hahai89
$ echo "hahai89" | grep "hai[0-9]\+"
hahai89
```

```
$ echo "haha i889" | grep "8*"
haha i889




#
$ echo "haha i89" | grep "[a-zA-Z]\+ i89"
haha i89


#            ⊩   ⊳
$ echo "haha i89" | grep "\<i89\>"
haha i89
```

1.1.2

```
$ echo "haha [i8899" | grep -E "[^89]"    #      8  9
haha [i8899
```

1.2 ERE

ERE   BRE   ERE BRE

```
( ) { } ? + |
```

   :ERE   \

```
$ echo "haha [i889" | grep -E "(88)"    #    88 ()
haha [i889
$ echo "haha [i889" | grep -E "89\>"    #
haha [i889
$ echo "haha [i889" | grep -E "8+"    #          8
haha [i889

$ echo "haha [i8899" | grep -E "88|99"    #    88    99
haha [i8899


$ echo "haha) [i889" | grep -E "haha\)"    #    )
haha) [i889
```

```
{n} Match the preceding element if it occurs exactly n times.
{n,m} Match the preceding element if it occurs at least n times, but no
more than m times.
```

```
{n,} Match the preceding element if it occurs n or more times.
{,m} Match the preceding element if it occurs no more than m times.
```