1. Math function (int /double ) for example pow( , )
2. In 2 D array which is column which is row int [row][column]
3. 2D array, a.length = row, a[0].length = column
4. List.size() instead of the list.length()
5. Double r = Math.random() 已经表示为0-1之间的double random
6. 复习scanner的用法 scanner sh = new scanner(line)

Scanner file = new scanner(filename) new scanner (system.in)(键盘输入)

1. 根号的数学表达方法(Math class)

|  |  |
| --- | --- |
| **Method name** | **Description** |
| Math.abs(*value*)double | absolute value |
| Math.ceil(*value*)double | rounds up |
| Math.floor(*value*) double | rounds down |
| Math.log10(*value*) | logarithm, base 10 |
| Math.max(*value1*, *value2*) | larger of two values |
| Math.min(*value1*, *value2*) | smaller of two values |
| Math.pow(*base*, *exp*) | *base* to the *exp* power |
| Math.random() | random double between 0 and 1 |
| Math.round(*value*)int | nearest whole number |
| Math.sqrt(*value*) | square root |
| Math.sin(*value*)  Math.cos(*value*)  Math.tan(*value*) | sine/cosine/tangent of an angle in radians |
| Math.toDegrees(*value*)  Math.toRadians(*value*) | convert degrees to radians and back |

1. Printf
   1. %d integer
   2. %f real number
   3. %s string
   4. %**W**d integer, **W** characters wide, right-aligned
   5. %-**W**d integer, **W** characters wide, *left*-aligned
   6. %**W**f real number, **W** characters wide, right-aligned
   7. %.**D**f real number, rounded to **D** digits after decimal
   8. %**W**.**D**f real number, **W** chars wide, **D** digits after decimal
   9. %-**W**.**D**f real number, **W** wide (left-align), **D** after decimal
   10. %% 在printf打出%
2. Implement two different files never equal ( never!!!!!!!!!!!!!!!!!!!!!!!)
3. String[] 中element是null而不是“”
4. Arraylist

|  |  |
| --- | --- |
| add(**value**) | appends value at end of list |
| add(**index**, **value**) | inserts given value just before the given index, shifting subsequent values to the right |
| clear() | removes all elements of the list |
| indexOf(**value**) | returns first index where given value is found in list (-1 if not found) |
| get(**index**) | returns the value at given index |
| remove(**index**) | removes/returns value at given index, shifting subsequent values to the left |
| set(**index**, **value**) | replaces value at given index with given value |
| size() | returns the number of elements in list |
| toString() | returns a string representation of the list  such as "[3, 42, -7, 15]" |