1) List<String> list = new ArrayList<String>();

Legal

2) List<String> list = new ArrayList<>();

Legal

3) List<Object> list = new ArrayList<String>();

Illegal

4) ArrayList<Object> list = new ArrayList<String>();

Illegal

5) ArrayList<String> list = new ArrayList<Object>();

Illegal

6) ArrayList list = new ArrayList<String>();

Legal

7) ArrayList<String> list = new ArrayList();

Legal

8) ArrayList<String> stringList = null;
   ArrayList<? extends String> extendsStringList = stringList;

Legal

9) ArrayList<?> list = new ArrayList<Number>();

Legal

10) ArrayList<? extends Number> extendsList = null;
    ArrayList<? super Number> superList = extendsList;

Illegal

11) ArrayList<? super Number> superNumList = null;
   ArrayList<? super Integer> superIntList = superNumList;
Legal

12) ArrayList<Object> list = new ArrayList<Object>();
    list.add("Hello");
Legal

13) ArrayList<?> list = new ArrayList<String>();
   list.add("Hello");
Illegal

14) ArrayList<? super Integer> list= new ArrayList<Integer>();
    list.add(1);
Legal

15) ArrayList<? extends Number> list= new ArrayList<Integer>();
   list.addAll(new ArrayList<Integer>());
Illegal

16) ArrayList<? super Integer> superIntList = new ArrayList<Number>();
    ArrayList<? extends Integer> extendsIntList = new ArrayList<Integer>();
    extendsIntList.addAll(superIntList);
Illegal

17) ArrayList<Integer> intList = new ArrayList<Integer>();
    intList.add(new Integer(1));
    ArrayList<? extends Number> extendsNumList= intList;
    Integer integer = extendsNumList.get(0);
Illegal

18) ArrayList<String>[] twoDimArray = new ArrayList <String>[10];
Illegal

19) Pair<String, String>[] array = new Pair[2];
    array[0] = new Pair<String, String>("1", "y");

```
    array[1] = new Pair(true, false);
```
Legal

20) Pair<?,?>[] array = new Pair<?,?>[2] ;
```
    array[0] = new Pair<Integer,Integer>(0,0);
    array[1] = new Pair<String,String>("Hello","There");
```
Legal