1.面积之和

public abstract class Geometry {  
 public abstract double getArea();  
}

public class Rect extends Geometry {  
 double a,b;  
 Rect(double a,double b){  
 this.a=a;  
 this.b=b;  
 }  
 public double getArea(){  
 return a\*b;  
 }  
}

public class Circle extends Geometry {  
 double r;  
 Circle(double r){  
 this.r=r;  
 }  
 public double getArea(){  
 return(3.14\*r\*r);  
 }  
}

public class Student {  
 public double area(Geometry...p){  
 double sum=0;  
 for(int i=0;i<p.length;i++){  
 sum=sum+p[i].getArea();  
 }  
 return sum;  
 }  
}

public class Main{  
 public static void main(String args[]){  
 Student zhang=new Student();  
 double area= zhang.area(new Rect(2,3),new Circle(5.2),new Circle(12));  
 System.out.printf("两个圆和一个矩形图像的面积和:\n%103f",area);  
 }  
}



2.薪水总和

abstract class Employee {  
 public abstract double earnings();  
}  
class YearWorker extends Employee {  
 public double earnings(){  
 return 15000;  
 }  
}  
class MonthWorker extends Employee {  
 public double earnings(){  
 return 12\*6300;  
 }  
}  
class WeekWorker extends Employee {  
 public double earnings(){  
 return 52\*780;  
 }  
}  
class Company {  
 Employee[] employee;  
 double salaries =0;  
 Company( Employee[]employee) {  
 this.employee =employee;  
 }  
 public double salariesPay(){  
 salaries = 0;  
 for(int i=0;i<employee.length;i++){  
 salaries=salaries+employee[i].earnings();  
 }  
 return salaries;  
 }  
}  
public class CompanySalary{  
 public static void main(String args[ ]) {  
 Employee [] employee = new Employee[29]; //公司有 29 名雇员  
 for(int i=0;i<employee. length;i++){ //雇员简单地分成三类  
 if(i%3==0)  
 employee[i]= new WeekWorker( ); else if(i%3==1)  
 employee[i] = new MonthWorker( ); else if(i%3== 2)  
 employee[i]= new YearWorker( );  
 }  
 Company company = new Company(employee);  
 System.out.println("公司薪水总额:"+company.salariesPay()+"元");  
 }  
}



习题：

1.子类将继承父类的哪些成员变量和方法?子类在什么情况下隐藏父类的成员变量和方法?

子类将继承父类中**除了构造方法**的**所有成员变量和方法**。子类隐藏父类的成员变量和方法的情况通常发生在子类中声明了与父类相同名字的成员变量或方法时。

2.父类的 final 方法可以被子类重写吗?

**父类的 final 方法不可以被子类重写**

3.什么类中可以有abstract 方法?

抽象类。

4.什么叫对象的上转型对象?

指的是将子类创建的对象的引用赋给父类对象。

5.下列叙述正确的是\_\_D\_\_\_\_\_。

A.final 类不可以有子类

B.abstract 类中只可以有abstract方法

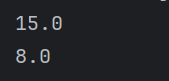
C.abstract 类中可以有非abstract方法,但该方法不可以用final修饰

D.不可以同时用final 和abstract修饰一个方法

6.请说出E类中System.out.println的输出结果。

class A {  
 double f ( double x, double y) {  
 return x + y;  
 }  
}  
class B extends A{  
 double f( int x, int y) {  
 return x\* y;}  
}

public class E {  
 public static void main(String args[]) {  
 B b = new B( );  
 System.out.println(b.f(3,5));  
 System.out.println(b.f(3.0,5.0));  
 }  
}



7.请说出E类中System.out. println的输出结果。

class A {  
 double f(double x, double y) {  
 return x + y;  
 }  
  
 static int g(int n) {  
 return n \* n;  
 }  
}

class B extends A {  
 double f ( double x, double y) {  
 double m = super. f(x,y); return m + x \* y;  
 }  
 static int g( int n) {  
 int m= A.g(n); return m + n;  
 }  
}

public class E {  
 public static void main(String args[ ]) {  
 B b = new B( );  
 System. out.println(b.f(10.0,8.0));  
 System. out. println(b.g(3));  
 }  
}

