Midterm 2 out of 70 to be converted to 20

/3

```
public interface sportActivity {…….1
     public double getBudget();…….1
     public void displayAll();…….1

}
```

/20

```
public abstract class playGround implements sportActivity{
…….1+1

     private String name;
     private int nMatchesPlayed; …….1

     private Equipment [] arrEquip; …….1
     private int nbEquip; …….1


public playGround(String name, int nMatchesPlayed, int size)
{
          this.name = name;
          this.nMatchesPlayed = nMatchesPlayed; …….1
          arrEquip = new Equipment[size]; …….1
          nbEquip= 0;
}

     public double totalBudget()
     {
          double t =0.0; …….1

     for(int i= 0; i < nbEquip; i++)…….1
     {
          try { …….1
               t += arrEquip[i].getBudget();…….1+1
          }
          catch(Exception e) …….1
          {
```

```
        System.out.println(e.getMessage());…….1
             }
        }

        return t; …….1

        }


        public int getnMatchesPlayed() {
             return nMatchesPlayed; …….1
        }

        public void displayAll()
        {
             System.out.println("The name is: " + name);
…….1

System.out.println("The number of matches played is: " +
nMatchesPlayed); …….1
             for(int i =0; i< nbEquip; i++)…….1
                  arrEquip[i].display();…….1
        }



}

/15
public class FootBallGround extends playGround{ ……1

             private int goalsScored;  …….1
             private int durationInMinutes; …….1

public FootBallGround(String name, int nMatchesPlayed, int
size, int goalsScored, int durationInMinutes)
             {
                  super(name, nMatchesPlayed, size); ……1
```

```
            this.goalsScored=goalsScored; ……..1
            this.durationInMinutes= durationInMinutes; ……..1

        }

         public int getGoalsScored() {
              return goalsScored; ……..1
         }

    public double deflationCost(int nMp)
    {
         if(nMp <= 50)    ……..1
              return 10000; ……..1
         else
              return 0.18 * deflationCost(nMp - 1); ……..1+1
    }

    public double getBudget()
    {
         double p; ……..1
    p = totalBudget() - deflationCost(getnMatchesPlayed());
……1+1

         return p; ……..1
    }
}


32
public class CitySportClub {
    private String name;
    private playGround[] arGrounds; ……..1
    private int nbG;   ……..1

    public CitySportClub(String name, int size) {
         this.name = name;
         arGrounds = new playGround[size]; ……..1
         this.nbG = 0; ……..1
    }
```

```
     public void split(CricketGround arCG[], FootBallGround
arFG[], int gs, double bud) throws Exception ……..1
     {
          int j=0, k =0; ……..1

          for(int i=0; i< nbG; i++)……..1
          {
               if(arGrounds[i] instanceof FootBallGround) ……1
               {

     if(((FootBallGround)arGrounds[i]).getGoalsScored() ==gs)
                    {     ……1+1
                         if(j< 10) ……..1
     arFG[j++] = (FootBallGround)arGrounds[i]; ……1+1+1
                         else
                              throw new Exception("The number
of FootBallGround objects exceeded 10"); ……..1
                    }
               }
               else
               {
          if(arGrounds[i].getBudget() >= bud) ……..1
                    {
                    if(k< arCG.length) ……..1
          arCG[j++] = (CricketGround)arGrounds[i]; ……1+1+1
                         else
throw new Exception("The number of cricket objects exceeded
"); ……1
                    }
               }
          }

     }


          public double avgCricketMatch(int runs)
          {
               double sum =0.0; ……1
```

```
                int count =0; ……1


                for(int i=0; i< nbG; i++) ……1

                {
                     if(arGrounds[i] instanceof CricketGround
&& ((CricketGround)arGrounds[i]).getRunsScored()==runs)
                     {   ……1+1+1
                          count++;  ……1
     sum += arGrounds[i].getnMatchesPlayed();……1
                     }
                }

                if(count !=0) ……1
                     return sum/count; ……1
                else
                     return sum; ……1
          }

     }
```