

```
1  /*
2  * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to
   change this license
3  * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this
   template
4  */
5  package proyecto07.polimorfismo;
6
7  /**
8   *
9   * @author miguel.guanira
10  */
11  public abstract class Figura {
12      private String identificacion;
13      private double base;
14      private double altura;
15
16      public Figura(String identificacion,double base,double altura){
17          this.identificacion = identificacion;
18          this.base = base;
19          this.altura = altura;
20      }
21
22      public abstract double calculaArea();
23
24      public void imprimeResultados(){
25          System.out.printf("ID      : %s\n", getIdentificacion());
26          System.out.printf("Base   : %10.2f\n", getBase());
27          System.out.printf("Altura: %10.2f\n", getAltura());
28      }
29
30      /**
31       * @return the identificacion
32       */
33      public String getIdentificacion() {
34          return identificacion;
35      }
36
37      /**
38       * @param identificacion the identificacion to set
39       */
40      public void setIdentificacion(String identificacion) {
41          this.identificacion = identificacion;
42      }
43
44      /**
45       * @return the base
46       */
47      public double getBase() {
48          return base;
49      }
50
51      /**
52       * @param base the base to set
53       */
54      public void setBase(double base) {
55          this.base = base;
56      }
57
58      /**
59       * @return the altura
60       */
61      public double getAltura() {
62          return altura;
63      }
64  }
```

```
65      /**
66       * @param altura the altura to set
67       */
68      public void setAltura(double altura) {
69          this.altura = altura;
70      }
71
72  }
73
74  /*
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77   * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this
78   * template
79   */
80  package proyecto07.polimorfismo;
81
82  /**
83   *
84   * @author miguel.guanira
85   */
86  public class Rectangulo extends Figura{
87
88      public Rectangulo(String identificacion,double base,
89                          double altura) {
90          super(identificacion,base,altura);
91      }
92
93      @Override
94      public double calculaArea(){
95          return getBase()*getAltura();
96      }
97
98      @Override
99      public void imprimeResultados(){
100          super.imprimeResultados();
101          System.out.printf("Formula: base x altura\n");
102          System.out.printf("Area      : %10.2f\n",calculaArea());
103      }
104  }
105
106  /*
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109   * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Class.java to edit this
110   * template
111   */
112  package proyecto07.polimorfismo;
113
114  /**
115   *
116   * @author miguel.guanira
117   */
118  public class Triangulo extends Figura{
119
120      public Triangulo(String identificacion,double base,
121                          double altura) {
122          super(identificacion,base,altura);
123      }
124
125      @Override
126      public double calculaArea(){
127          return getBase()*getAltura()/2;
128      }
129
130      @Override
131      public void imprimeResultados(){
```

```
127         super.imprimeResultados();
128         System.out.printf("Formula: base x altura /2\n");
129         System.out.printf("Area      : %10.2f\n", calculaArea());
130     }
131 }
132
133 /*
134  * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to
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136  * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Main.java to edit this
137  * template
138  */
139 package proyecto07.polimorfismo;
140
141 import java.util.ArrayList;
142
143 /**
144  *
145  * @author miguel.guanira
146  */
147 public class Proyecto07Polimorfismo {
148
149     /**
150      * @param args the command line arguments
151      */
152     public static void main(String[] args) {
153         // TODO code application logic here
154         Rectangulo r1=new Rectangulo("REct1", 4.67, 3.87);
155         Rectangulo r2=new Rectangulo("REct2", 11.22, 33.44);
156         Triangulo t1= new Triangulo("Tri1", 203.74, 196.45);
157         Triangulo t2= new Triangulo("Tri2", 511.22, 122.22);
158
159         ArrayList <Figura> figuras =new ArrayList<>();
160         figuras.add(t2);
161         figuras.add(r1);
162         figuras.add(r2);
163         figuras.add(t1);
164         for(Figura f: figuras)
165             f.imprimeResultados();
166     }
167 }
168
```