

## Class PolygonTurtle

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```
1 import edu.fcps.Turtle;
2 public class PolygonTurtle extends Turtle
3 {
4     private double mySize;
5     private int mySides;
6     /**
7      * Constructor for PolygonTurtle with no arguments
8      */
9     public PolygonTurtle()
10    {
11        super();
12        mySize = 50.0;
13        mySides = 6;
14    }
15
16    /**
17     * Constructor for PolygonTurtle with 2 arguments
18     *
19     * @param n    Size of sides
20     * @param s    Number of sides
21     */
22    public PolygonTurtle(double n, int s)
23    {
24        mySize = n;
25        mySides = s;
26    }
27
28    /**
29     * Constructor for PolygonTurtle with 5 arguments
30     *
31     * @param x    Initial x coordinate
32     * @param y    Initial y coordinate
33     * @param h    Initial heading degrees
34     * @param n    Size of sides
35     * @param s    Number of sides
36     */
37    public PolygonTurtle(double x, double y, double h, double n, int s)
38    {
39        super(x, y, h);
40        mySize = n;
41        mySides = s;
42    }
43
44    /**
45     * Accessor method setSize to change private size variable
46     *
47     * @param n    Double to set size to
48     */
49    public void setSize(double n)
```

## Class PolygonTurtle (continued)

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```
50     {
51         mySize = n;
52     }
53
54     /**
55      * Accessor method setsides to change private sides variable
56      *
57      * @param s    Double to set sides to
58      */
59     public void setsides(int s)
60     {
61         mySides = s;
62     }
63
64     /**
65      * Method drawShape draws shape according to sides and size
66      */
67     public void drawShape()
68     {
69         setPenDown(true);
70         for (int i=0;i<mySides;i++) {
71             forward(mySize);
72             turnRight(360/mySides);
73         }
74         setPenDown(false);
75     }
76
77     /**
78      * Method drawShape overloaded with an argument for number of sides
79      *
80      * @param s    Number of sides
81      */
82     public void drawShape(int s)
83     {
84         setsides(s);
85         setPenDown(true);
86         for (int i=0;i<mySides;i++) {
87             forward(mySize);
88             turnRight(360/mySides);
89         }
90         setPenDown(false);
91     }
92 }
```