Triangle2D

- p1 : MyPoint
- p2 : MyPoint
- p3 : MyPoint

Point 1 of the triangle default (0,0)
Point 2 of triangle default (1, 1)
Point 3 of triangle default (2, 5)

Triangle2D()
No-arg constructor using defaults

Triangle2D(newP1 : MyPoint, newP2 : MyPoint, newP3 : MyPoint)
Construct new triangle with new points

+ getP1() : MyPoint
Get point 1 of triangle

+ setP1(newX : double, newY : double) : void
Set new x and y values for point 1

+ getP2() : MyPoint
Get point 2 of triangle

+ setP2(newX : double, newY : double) : void
Set new x and y values for point 2

+ getP3() : MyPoint
Get point 3 of triangle

+ setP3(newX : double, newY : double) : void
Set new x and y values for point 3

+ getArea() : double
Compute area of triangle

+ getPerimeter : double
Compute perimeter of triangle

+ contains(newP : MyPoint) : boolean
Method returns true if point newP is within triangle

+ contains(newTriangle : Triangle2D) : boolean
Method returns true if newTriangle is within triangle

+ overlaps(newTriangle : Triangle2D) : boolean
Method returns true if newTriangle overlaps triangle

Line

-p1x : double
-p1y : double
-p2x : double
-p3x : double
-A : double
-B : double
-C : double

+Line(p1x : double, p1y : double, p2x : double, p2y : double)
+getA() : double
+getB() : double
+getC() : double
+get1X() : double
+get1Y() : double
+get2X() : double
+get2Y() : double
+calculateArea(p1 : MyPoint, p2 : MyPoint, p3 : MyPoint) : double
+calculateContains(p : MyPoint) : double