class Triangle {

double x1,y1;

double x2,y2;

double x3,y3;

public Triangle(Point a, Point b, Point c) {

//TODO

x1 = a.getX();

y1 = a.getY();

x2 = b.getX();

y2 = b.getY();

x3 = c.getX();

y3 = c.getY();

if(area() == 0)

throw new IllegalArgumentException();

}

public double area() {

//TODO

double area\_of\_triangle = 0.5 \* ((x1 \* (y2 - y3)) + (x2 \* (y3 - y1)) + (x3 \* (y1 - y2)));

return Math.abs(area\_of\_triangle);

}

public Point centroid(){

//TODO

double x = (x1+x2+x3)/3;

double y = (y1+y2+y3)/3;

return new Point(x,y);

}

}