Area of simple polygon

```
struct point{
    double x, y;
};

double area(const vector<point>& fig) {
    double res = 0;
    for (unsigned i = 0; i < fig.size(); i++) {
        point p = i ? fig[i - 1] : fig.back();
        point q = fig[i];
        res += (p.x - q.x) * (p.y + q.y);
    }
    return fabs(res) / 2;
}
```

Calc degree of angle from three points:

```
double calculateAngle(double P1X, double P1Y, double P2X, double P2Y,
    double P3X, double P3Y){

    double numerator = P2Y*(P1X-P3X) + P1Y*(P3X-P2X) + P3Y*(P2X-P1X);
    double denominator = (P2X-P1X)*(P1X-P3X) + (P2Y-P1Y)*(P1Y-P3Y);
    double ratio = numerator/denominator;

    double angleRad = atan(ratio);
    double angleDeg = (angleRad*180)/pi;

    if(angleDeg<0){
        angleDeg = 180+angleDeg;
    }

    return angleDeg;
}
```