### Segment Circle - Point A - Point 0 Point - Point B - double r - double x + Segment() - double y + Circle() + Segment(const Segment&) + Circle(const Circle&) + Point() + Segment(const Point&, const Point&) + Circle(const Point&, double) + Point(const Point&) + Segment(const Vector&) + set\_circle(const Point&, double) + Point(double, double) + set\_segment(const Point&, const Point&) + get0() const: Point + set\_point(double, double) + getA() const: Point + getr() const: double + getx() const: double + getB() const: Point + translate(const Vector&) + gety() const: double + translate(const Vector&) + symmetry(const Line&) + translate(const Vector&) + symmetry(const Line&) + perimeter() const: double + symmetry(const Line&) + length() const: double + area() const: double + operator==(const Point&, const Point&): bool + is\_parallel(const Segment&): bool + belong(const Point&): bool + operator!=(const Point&, const Point&): bool + is\_perpendicular(const Segment&): bool + is\_inside(const Point&): bool + belong(const Point&): bool + on(const Point&): bool + intersect(const Segment&): bool + is\_intersect(const Circle&): bool + operator==(const Segment&, const Segment&): bool + is\_separable(const Circle&): bool + operator!=(const Segment&, const Segment&): bool + is\_tangent(const Circle&): bool + tangent\_line(const Point&): Line + operator==(const Circle&, const Circle&): bool + operator!=(const Circle&, const Circle&): bool Triangle - Point A - Point B Square Rectangle - Point C - Point A - Point A + Triangle() - Point B - Point B + Triangle(const Triangle&) - Point C - Point C + Triangle(Point, Point, Point) - Point D - Point D + set\_triangle(Point, Point, Point) + Square() + Rectangle() + getA() const: Point + Square(const Square&) + Rectangle(const Rectangle&) + getB() const: Point + Square(const Point&, const Point&, const Point&, const + Rectangle(const Point&, const Point&, const Point&, const + getC() const: Point Point&) Point&) + translate(const Vector&) + set\_square(const Point&, const Point&, const Point&, const + set\_rectangle(const Point&, const Point&, const Point&, const + symmetry(const Line&) + perimeter() const: double + getA() const: Point + getA() const: Point + area() const: double + getB() const: Point + getB() const: Point + is\_inside(const Point&): bool + getC() const: Point + getC() const: Point + isRightAngled() const: bool + getD() const: Point + getD() const: Point + isAcuteAngled() const: bool + translate(const Vector&) + translate(const Vector&) + is0btuseAngled() const: bool + symmetry(const Line&) + symmetry(const Line&) + Incircle() const: Circle + perimeter() const: double + perimeter() const: double + Circumcircle() const: Circle + area() const: double + area() const: double + operator==(const Triangle&, const Triangle&): bool + inside(const Point&): bool + inside(const Point&): bool + operator!=(const Triangle&, const Triangle&): bool + operator==(const Square&, const Square&): bool + is\_square() const: bool + operator!=(const Square&, const Square&): bool + operator==(const Rectangle&, const Rectangle&): bool + operator!=(const Rectangle&, const Rectangle&): bool

### Line

- + attribute::type = defaultValue
- attribute2:type
- attribute3:type
- + Line()
- + Line(const Line&)
- + Line(const Point&, const Point&)
- + Line(double, double)
- + Line(const Vector&)
- + Line(const Segment&)
- + set\_Line(double, double)
- + geta() const: double
- + getb() const: double
- + translate(const Vector&)
- + symmetry(const Line&)
- + value\_at(double): double
- + zero\_of\_fun(double): double
- + belong(const Point&): bool
- + is\_parallel(const Line&): bool
- + is\_perpendicular(const Line&): bool

Vector

- + perpendicular\_at(const Point&): Line
- + operator==(const Line&, const Line&): bool
- + operator!=(const Line&, const Line&): bool

- double x
- double y
- + Vector()
- + Vector(const Vector&)
- + Vector(double, double)
- + Vector(const Point&, const Point&)
- + Vector(const Segment&)
- + set\_vector(double, double)
- + getx() const: double
- + gety() const: double
- + length() const: double
- + operator==(const Vector&, const Vector&): bool
- + operator!=(const Vector&, const Vector&): bool
- + operator+(const Vector\*, const Vector\*):

## Vector

+ operator-(const Vector&, const Vector&):

# Vector

double

- + operator\*(const Vector\*, double): Vector
- + operator\*(const Vector\*, const Vector\*):
- + operator+=(const Vector&): Vector&
- + operator-=(const Vector&): Vector&
- + operator\*=(double): Vector