```
#ifndef TRIANGLE_H
#define TRIANGLE_H

#include <iostream>
#include "color.h"

class Triangle {

    public:

        /**
         * @breif Create a triangle with a base, a height and a color, a base and
         *        a height, a base or with nothing
         * @param base   defalut value 0
         * @param height default value 0
         * @param color  default value Color()
         */
        Triangle(double base = 0, double height = 0, const Color& color = Color());

        /**
         * @breif Create a triangle with an object color
         * @param color
         */
        Triangle(const Color& color);

        /**
         * @breif Create a triangle with a color code (enum)
         * @param code
         */
        Triangle(Color::Code code);

        /**
         * @breif  Get the height of the triangle
         * @return The height of the triangle
         */
        double getHeight() const;

        /**
         * @breif  Get the base of the triangle
         * @return The base of the triangle
         */
        double getBase() const;

        /**
         * @breif  Calculat the surface of the triangle
         * @return The surface of the triangle
         */
        double getSurface() const;

        /**
         * @brief  Get the color of the triangle
         * @return The color of the triangle
         */
        Color getColor() const;

        /**
         * @breif  Change the height of the triangle
         * @param  height
         * @return The triangle
         */
        Triangle& setHeight(double height);

        /**
         * @breif  Change the base of the triangle
         * @param  base
         * @return The triangle
         */
        Triangle& setBase(double base);

        /**
         * @breif  Change the color of the triangle with an object color
```

```
72              * @param  color
73              * @return The triangle
74              */
75             Triangle& setColor(const Color& color);
76             /**
77              * @breif  Change the color of the triangle with a color code (enum)
78              * @param  color
79              * @return The triangle
80              */
81             Triangle& setColor(Color::Code color);
82
83             /**
84              * @breif  Display a triangle
85              * @param  stream
86              * @return The stream
87              */
88             std::ostream& display(std::ostream& stream = std::cout) const;
89
90         private:
91             double mBase;
92             double mHeight;
93             Color  mColor;
94     };
95
96     /**
97      * @breif  Overload of the output stream to display a triangle
98      * @param  stream
99      * @param  triangle
100     * @return The stream
101     */
102    std::ostream& operator<<(std::ostream& stream, const Triangle& triangle);
103
104
105    #endif // TRIANGLE_H
106
```