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70 lines (58 sloc) 1.45 KB

```
#include<iostream>
#include<math.h>

using namespace std;

class RightTriangle {

        private:
                float a;
                float b;
                float c;

        public:
                RightTriangle();
                RightTriangle(int x, int y, int hypotenuse);
    void printValues();
    bool isHypotenuseCorrect();
    void fixHypotenuse();
    void setHypotenuse(float x);
    float getHypotenuse();

};


int main () {
  RightTriangle* myTriangle = new RightTriangle(5, 12, 13);
  myTriangle->printValues();
  cout << "Hypotenuse correct? " << myTriangle->isHypotenuseCorrect() << endl;
  myTriangle->setHypotenuse(20);
  myTriangle->printValues();
  cout << "Hypotenuse correct? " << myTriangle->isHypotenuseCorrect() << endl;
  myTriangle->fixHypotenuse();
  myTriangle->printValues();
  cout << "Hypotenuse correct? " << myTriangle->isHypotenuseCorrect() << endl;
  cout << "Hypotenuse: " << myTriangle-> getHypotenuse() << endl;
        return 0;
}

RightTriangle::RightTriangle() {
}

RightTriangle::RightTriangle(int x, int y, int hypotenuse) {
  a = x;
  b = y;
  c = hypotenuse;
}
bool RightTriangle::isHypotenuseCorrect(){
        if (fabs(a*a + b*b - c*c) < 0.0001){
                //cout << "1"<< endl;
                return true;
        } else {
                //cout << "0" << endl;
                return false;
        }
}

```

```
void RightTriangle::fixHypotenuse(){
        c=sqrt(a*a+b*b);
}

void RightTriangle::printValues(){
        cout << "side 1: " << a << ", side 2: " << b << ", hypotenuse: " << c << endl;
}
void RightTriangle::setHypotenuse(float x){
  c = x;
}
float RightTriangle:: getHypotenuse(){
  return c;
}
```