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// virtual members
#include <iostream>
using namespace std;

class Polygon {
protected:
    int width, height;
public:
    void set_values(int a, int b)
    {
        width = a; height = b;
    }
    virtual int area()
    {
        return 0;
    }
};

class Rectangle : public Polygon {
public:
    int area()
    {
        return width * height;
    }
};

class Triangle : public Polygon {
public:
    int area()
    {
        return (width * height / 2);
    }
};

int main() {
    Rectangle rect;
    Triangle trgl;
    Polygon poly;
    Polygon * ppoly1 = &rect;
    Polygon * ppoly2 = &trgl;
    Polygon * ppoly3 = &poly;
    ppoly1->set_values(4, 5);
    ppoly2->set_values(4, 5);
    ppoly3->set_values(4, 5);
    cout << ppoly1->area() << '\n';
    cout << ppoly2->area() << '\n';
    cout << ppoly3->area() << '\n';
    getchar();
    return 0;
}

```