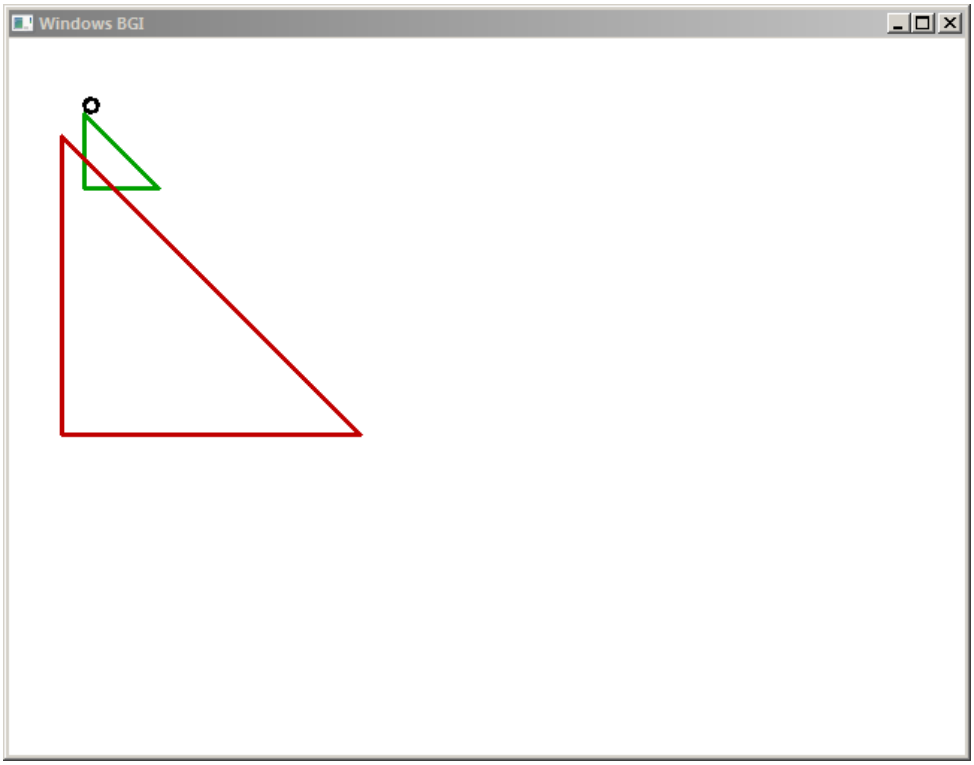
```
#include <graphics.h>
#include <stdio.h>
#include <stdlib.h>
#include <math.h>

void scale( int *, int, int, int, int, int);
void scale( int poly[], int vertex, int dx, int dy, int cx, int cy)
{
    int i;
        for(i=0; i < vertex; i++)
        {
                poly[2*i] = (poly[2*i] - cx) * dx + cx;
                poly[2*i+1] = (poly[2*i+1] - cy) * dy + cy;
        }
}

int main()
{
        int poly[20], vertex, i, dx, dy, cx=0, cy=0;

        printf( "Number of vertex: " );
        scanf( "%d", &vertex );

        for( i=0; i<vertex; i++)
        {
                printf( "Enter vertex (x%d,y%d) : ", i , i );
                scanf( "%d %d", &poly[2*i], &poly[2*i+1] );
        }

        poly[2*i] = poly[0];
        poly[2*i+1] = poly[1];
        vertex += 1;

        printf( "Enter dx: ");
        scanf( "%d", &dx);
        printf( "Enter dy: ");
        scanf( "%d", &dy);

        printf( "Enter the centre of scaling: ");
        scanf( "%d %d", &cx, &cy);

        setbkcolor(WHITE);
        setcolor(GREEN);
        setlinestyle(SOLID_LINE, 0, 3);
        drawpoly( vertex, poly );

        scale(poly,vertex,dx,dy,cx,cy);

        setcolor(RED);
        setlinestyle(SOLID_LINE, 0, 3);
        drawpoly( vertex, poly );

        setcolor(BLACK);
        circle(cx, cy, 5);

        while( !kbhit() );
        return EXIT_SUCCESS;
}
```




```
Number of vertex: 3
Enter vertex (x0,y0) : 50 50
Enter vertex (x1,y1) : 50 100
Enter vertex (x2,y2) : 100 100
Enter dx: 4
Enter dy: 4
Enter the centre of scaling: 55 45
```