```
%main program
clear
clf
hold on
tri(0,0,1,7)
axis equal off
hold off
%recursive function
function tri(a,b,h,m)
if m>0
    xx=[a,a+h,a+h/2,a];
    yy=[b,b,b+h*sqrt(3)/2,b];
    fill(xx,yy,'w')
    if m==1
        x=[a+h/4,a+h/2,a+3*h/4,a+h/4];
        y=[b+h*sqrt(3)/4,b,b+h*sqrt(3)/4,b+h*sqrt(3)/4];
        fill(x,y,'k')
    else
        tri(a,b,h/2,m-1)
        tri(a+h/2,b,h/2,m-1)
        tri(a+h/4,b+h*sqrt(3)/4,h/2,m-1)
    end
end
end
```



