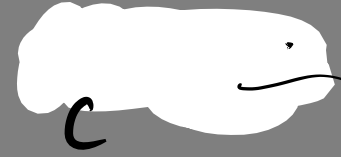
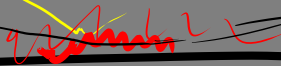


# Mirage

Speed of light

air — fast hot  
— slow cold



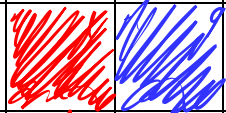
# Raster

=

rect array of pixels

= number  
color

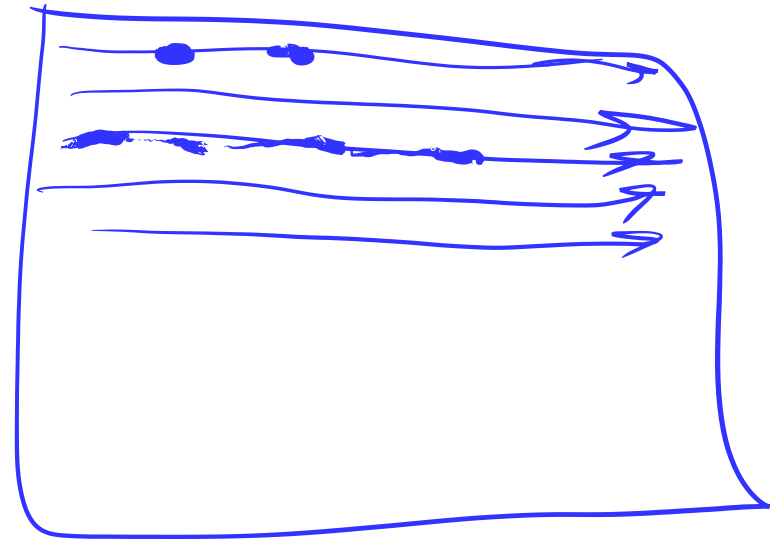
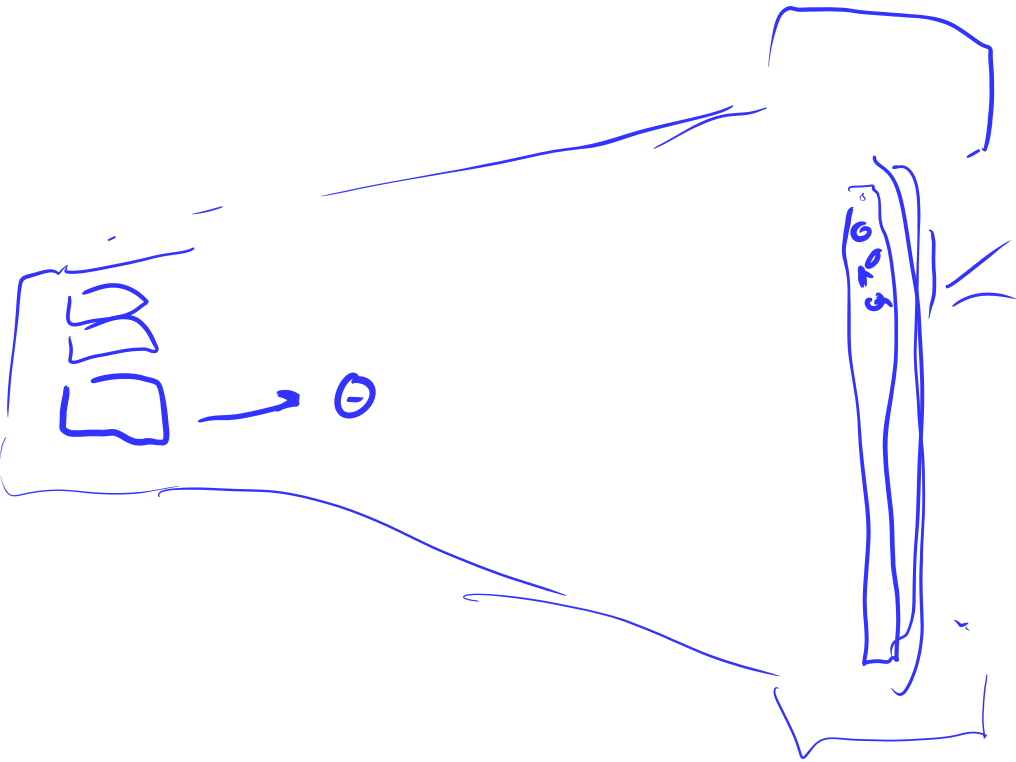
# Rasterization



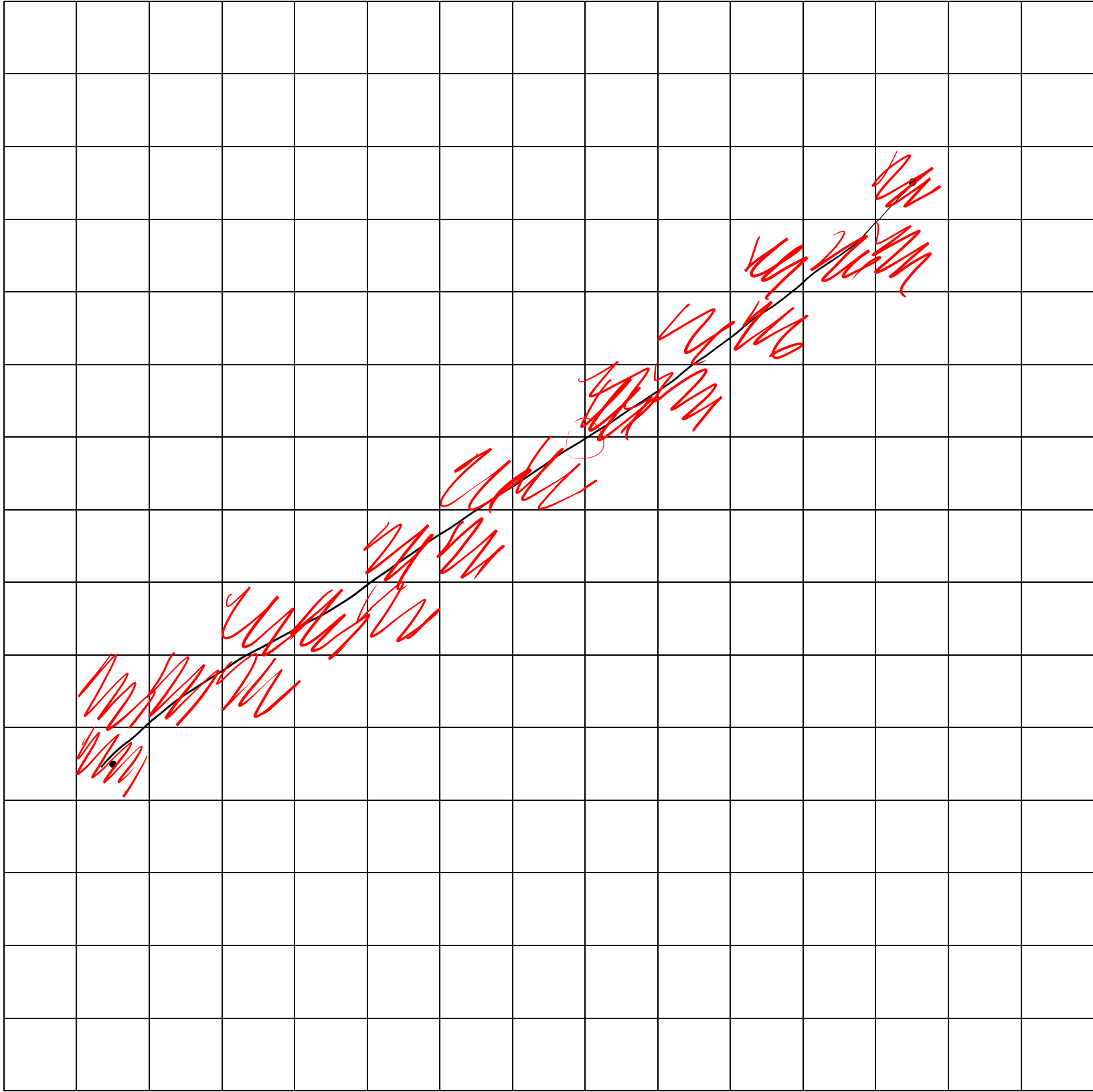
zss  
0  
0

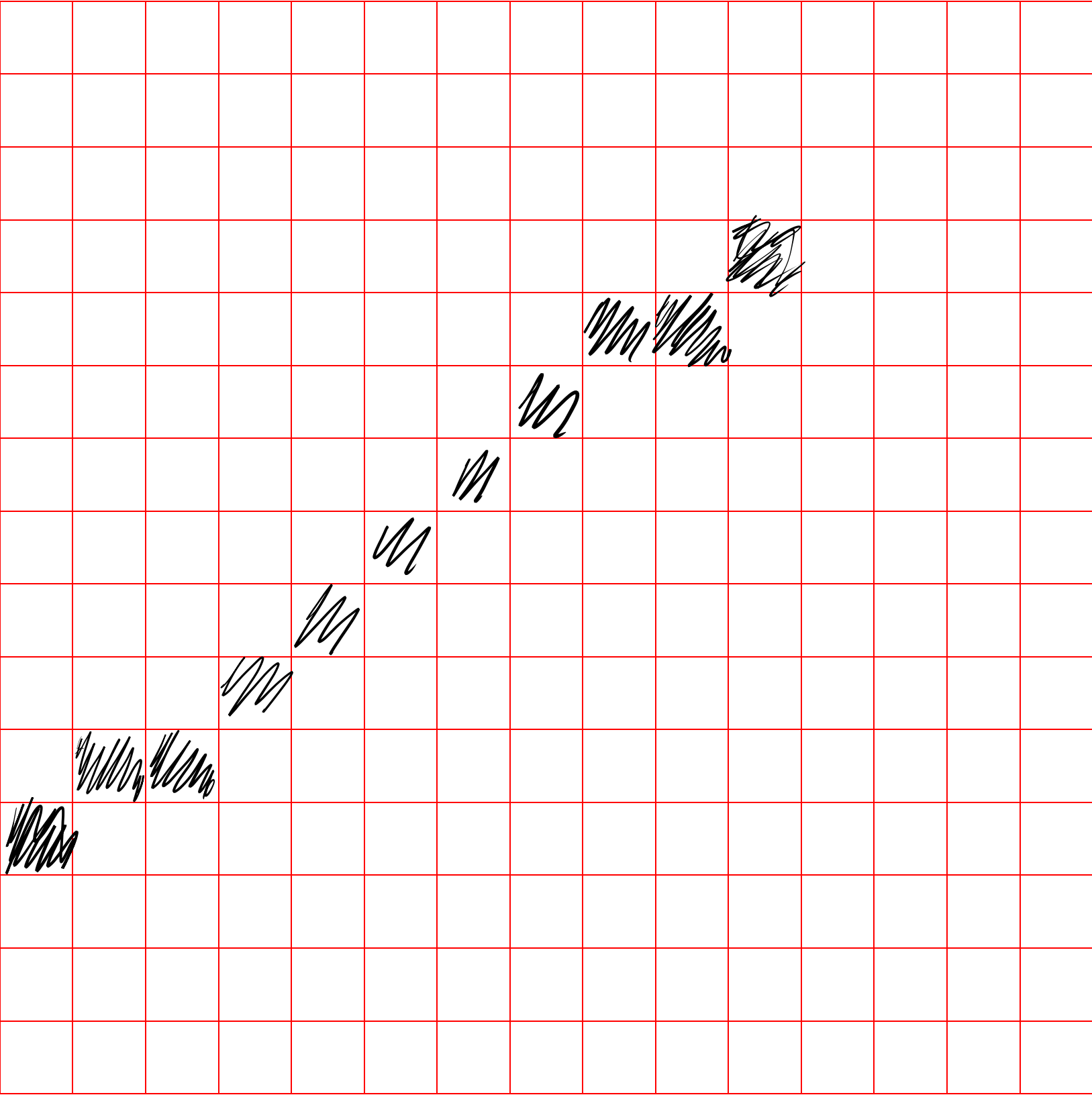
zoo  
↑  
zss

# CRT

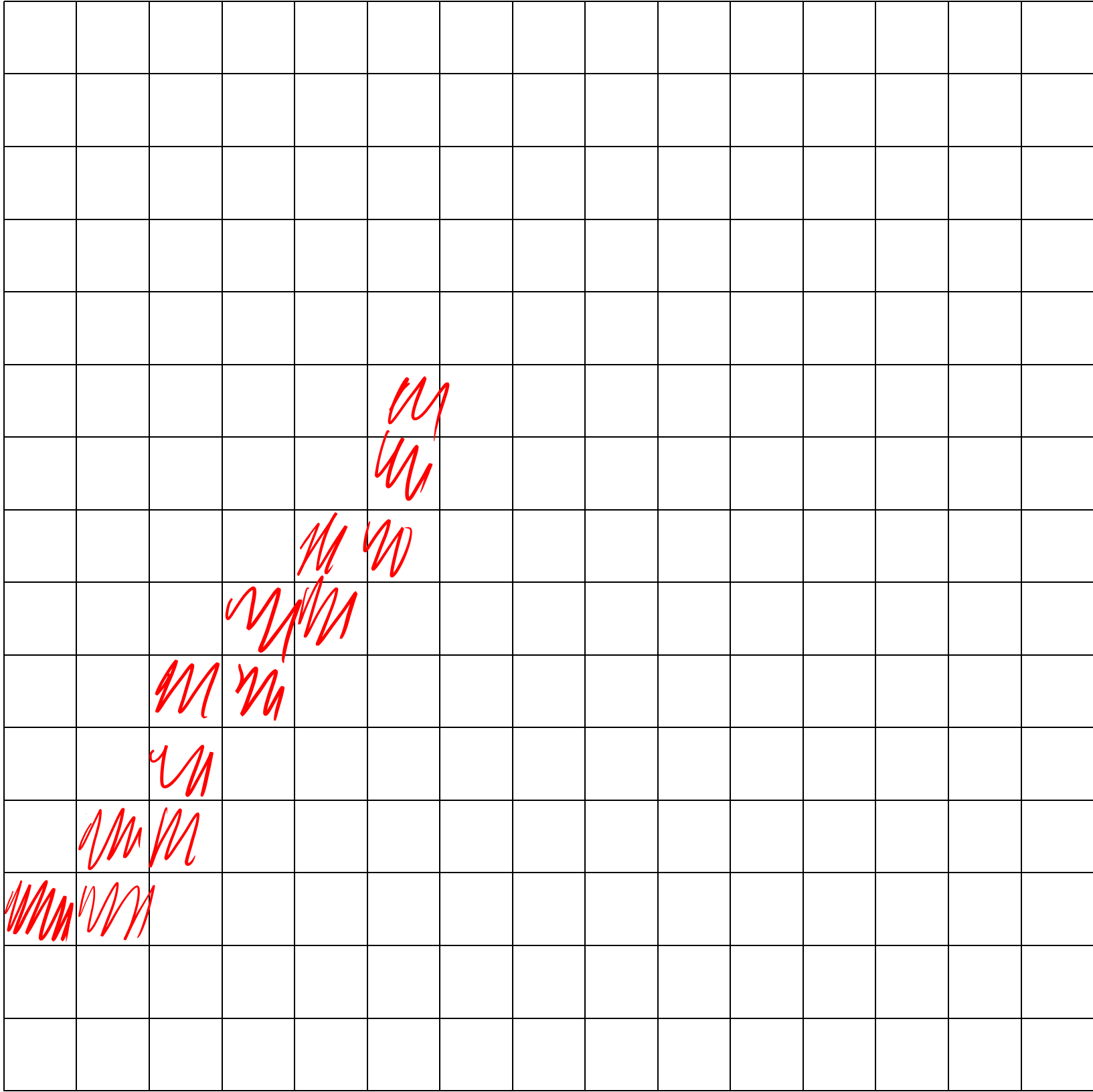


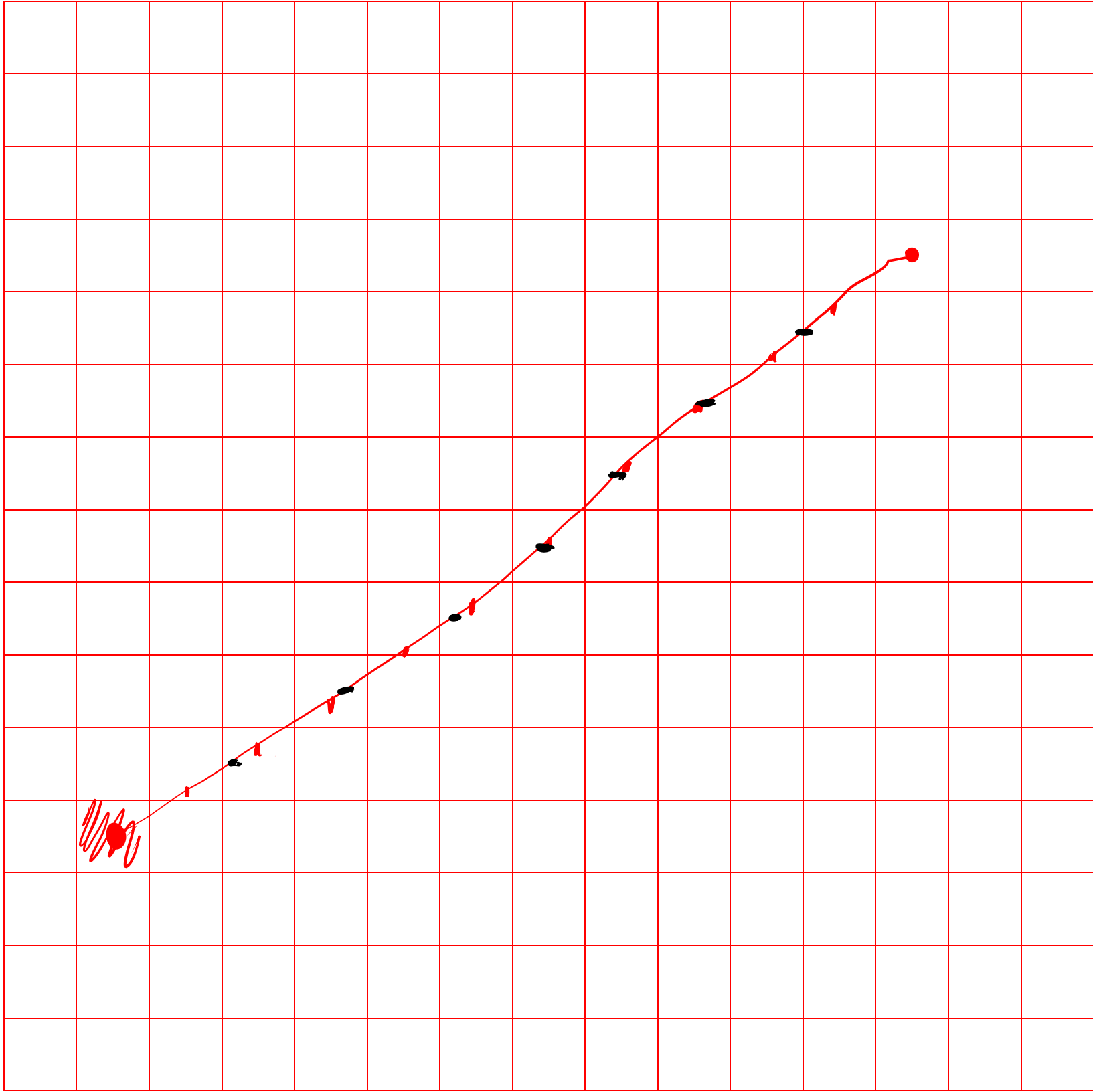
draw a line — rise 8  
↳ fill pixels run 11  $(\sqrt{8^2 + 11^2} \approx 14)$

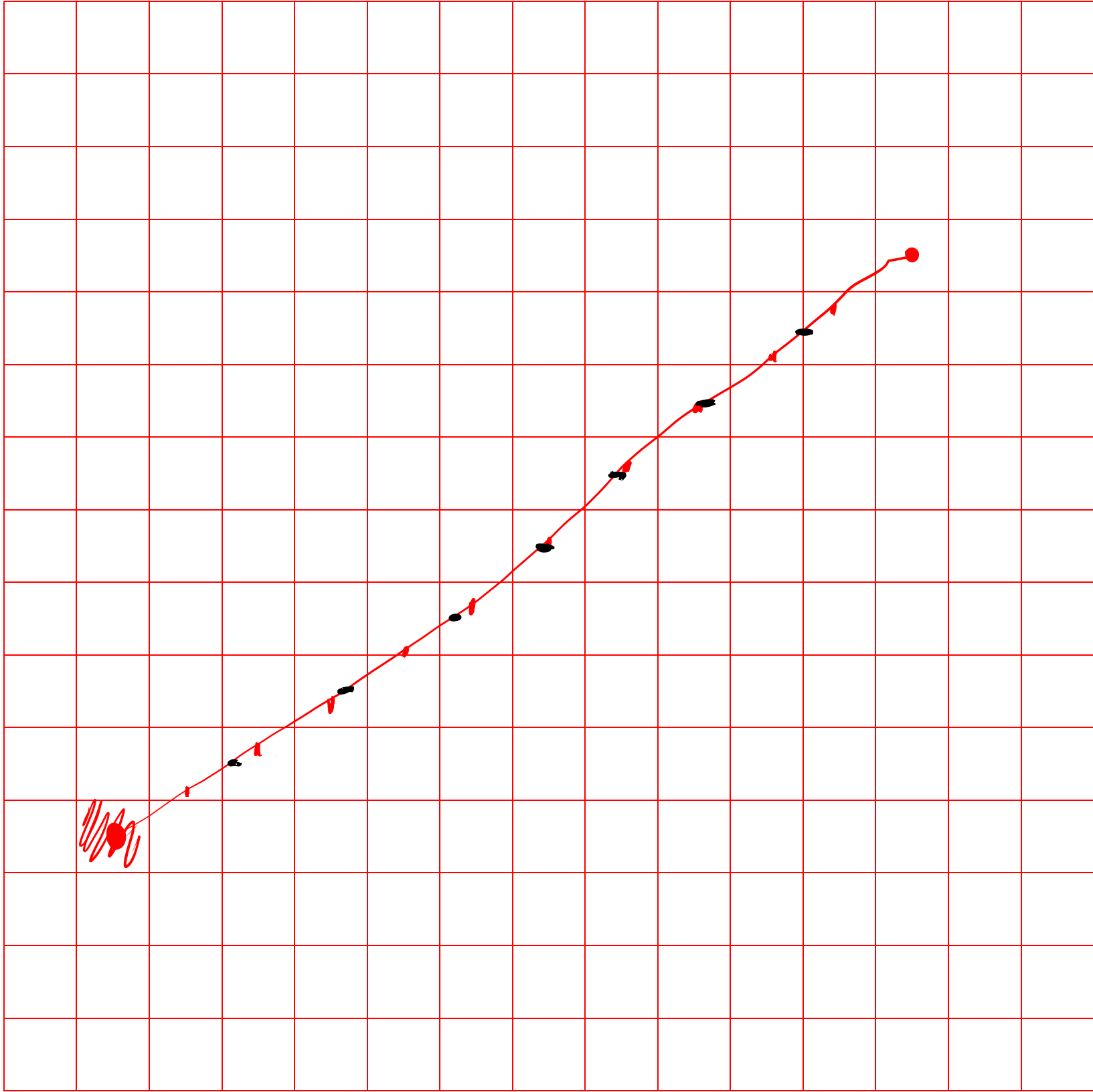




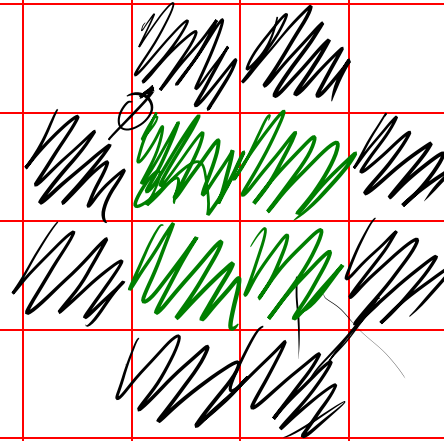
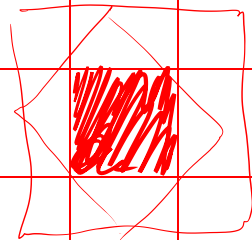








4-connect  
8-connect



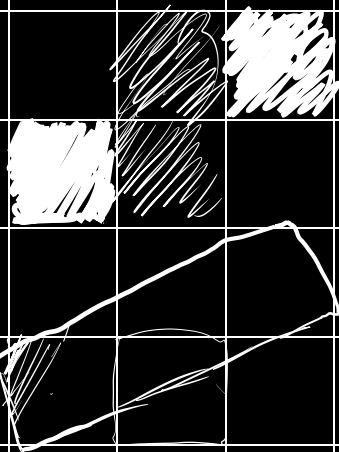
fill 4-com

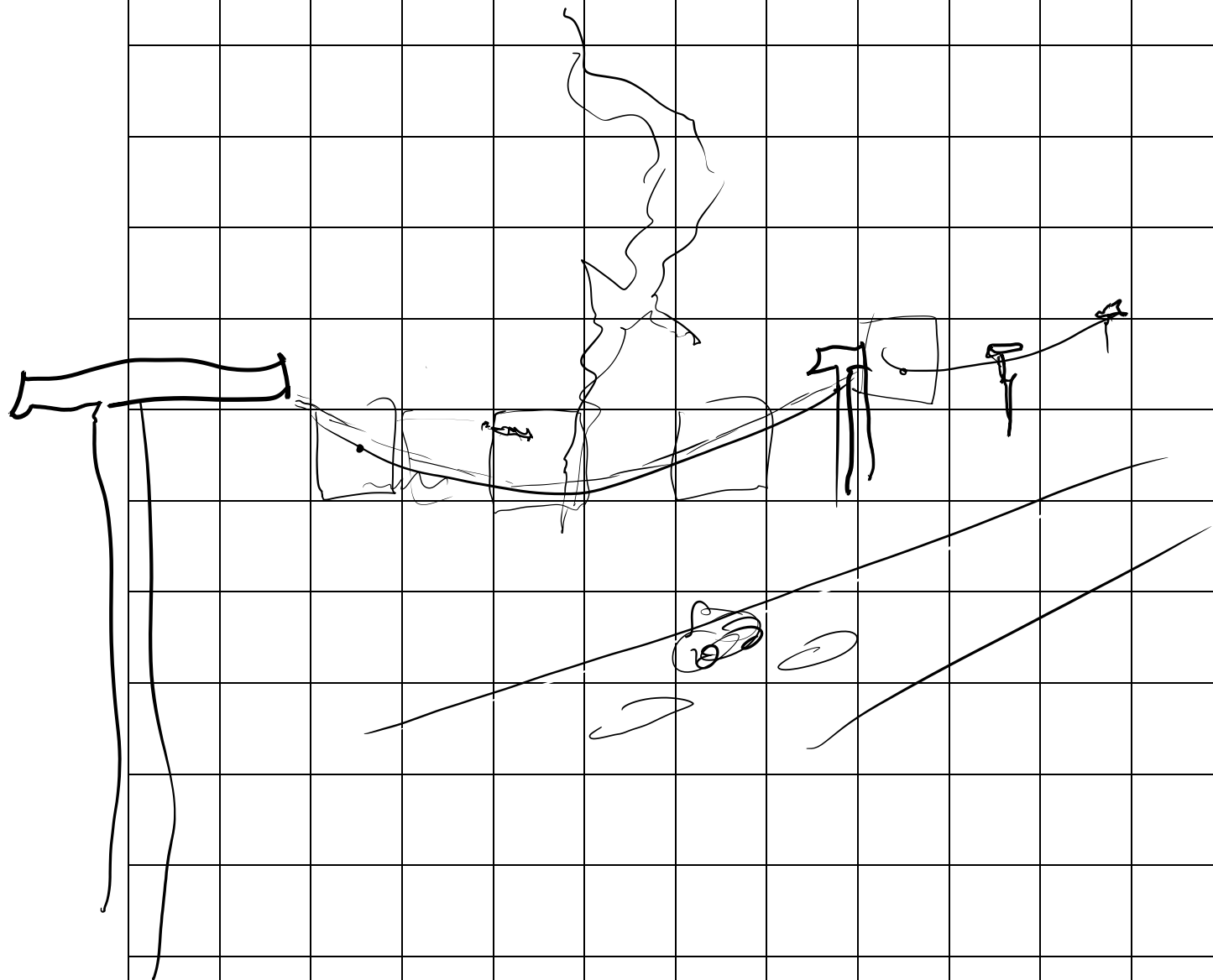
band 8-connect

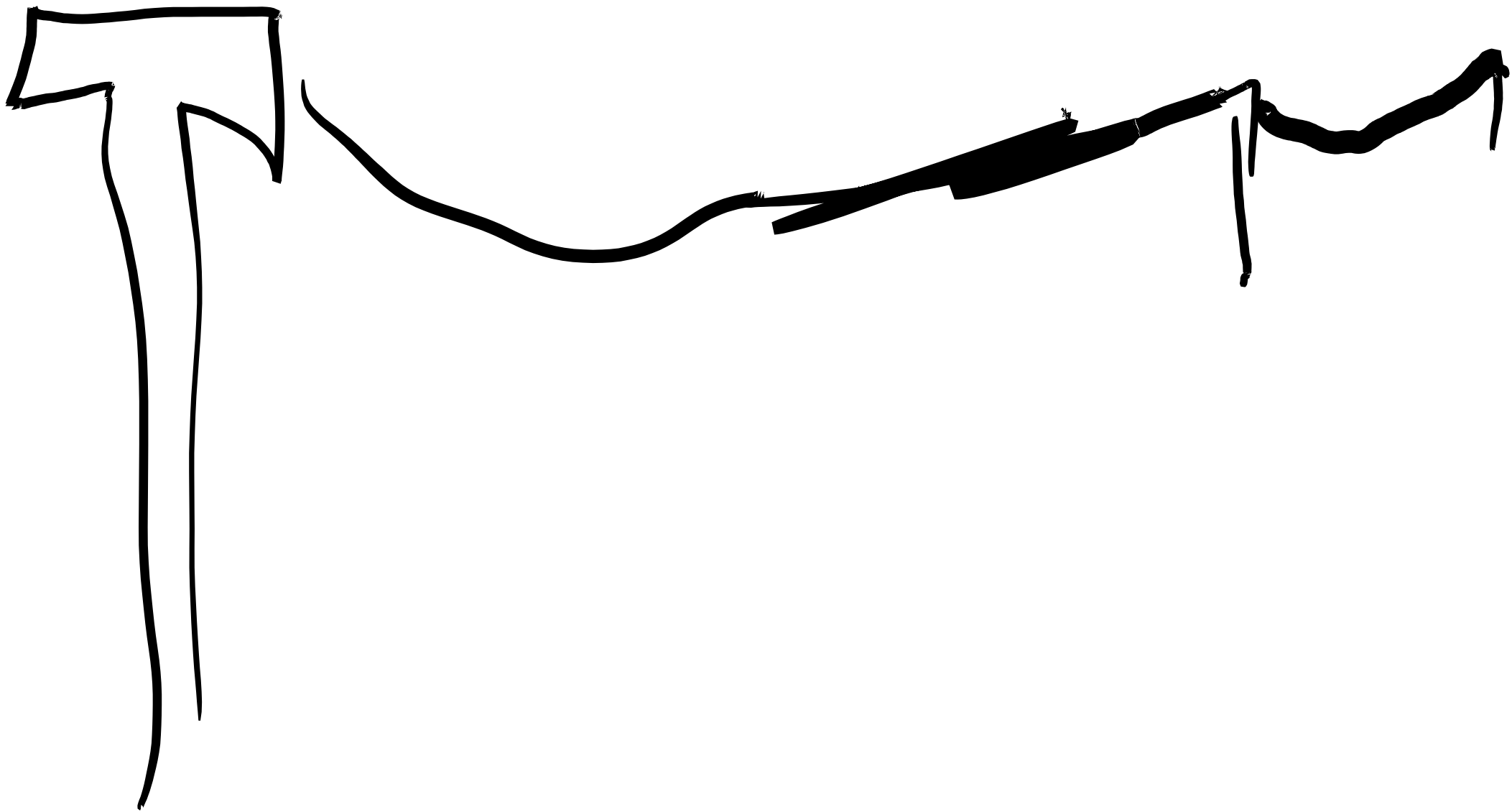


half-tone

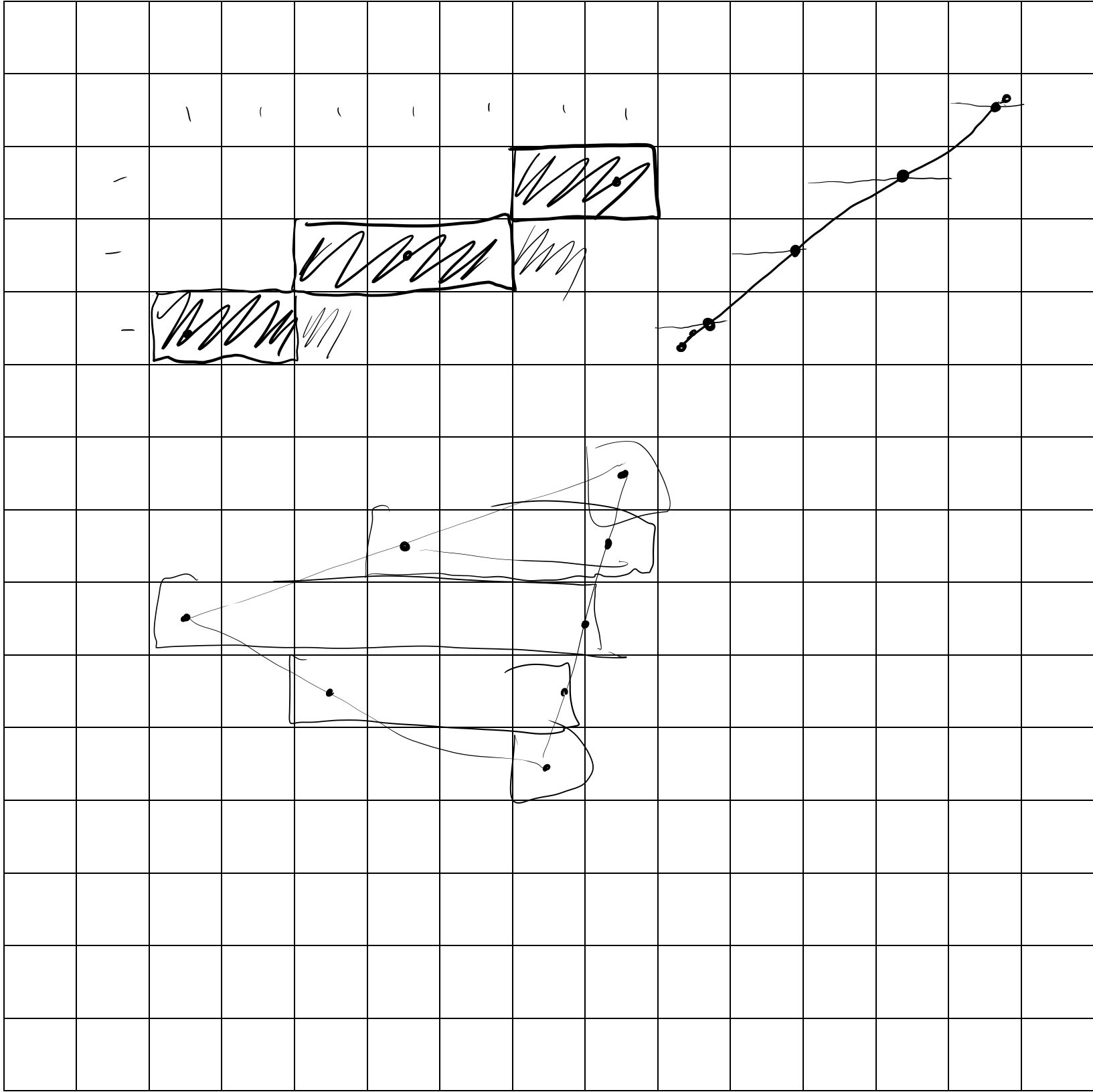
anti-alias

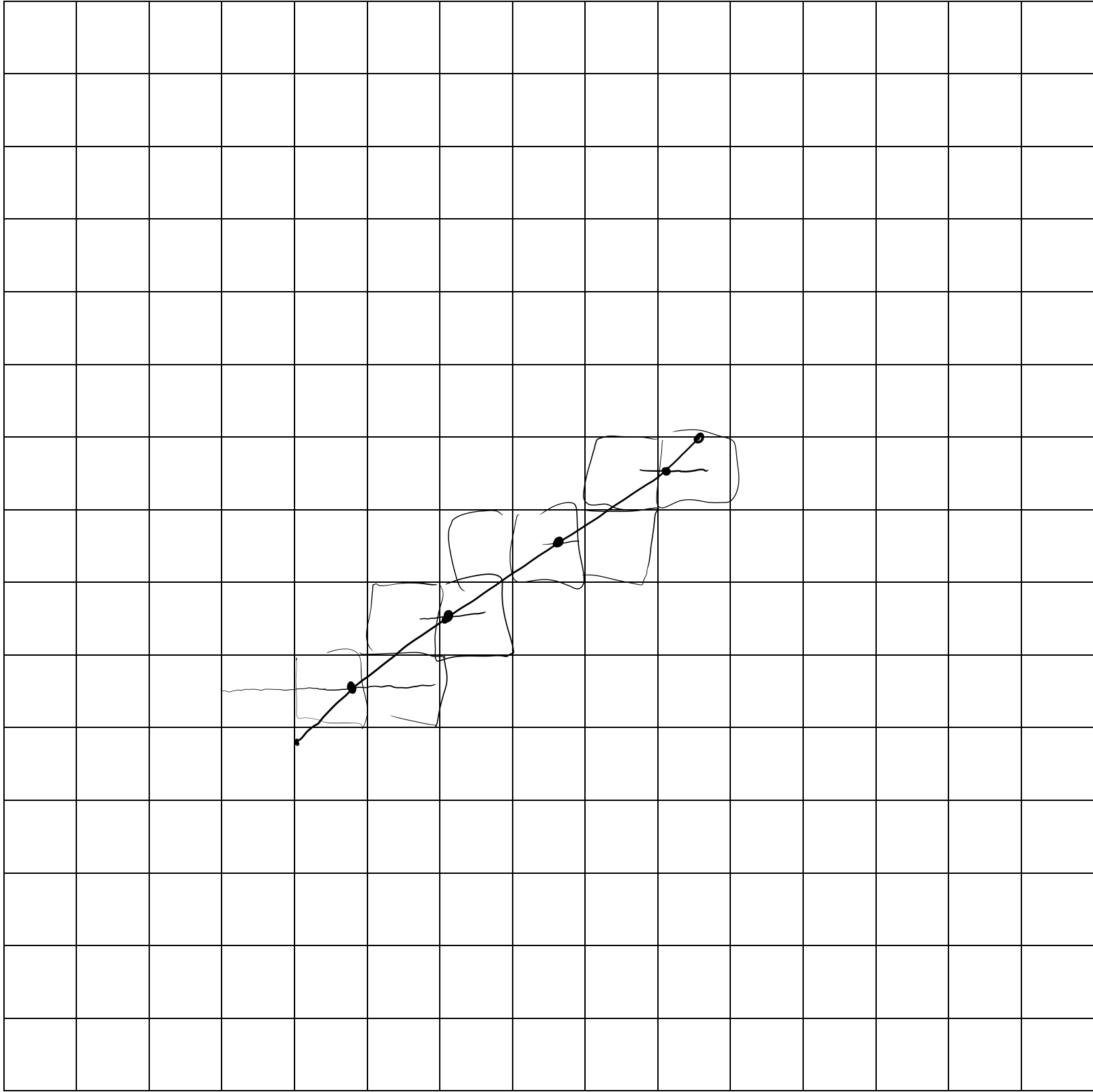






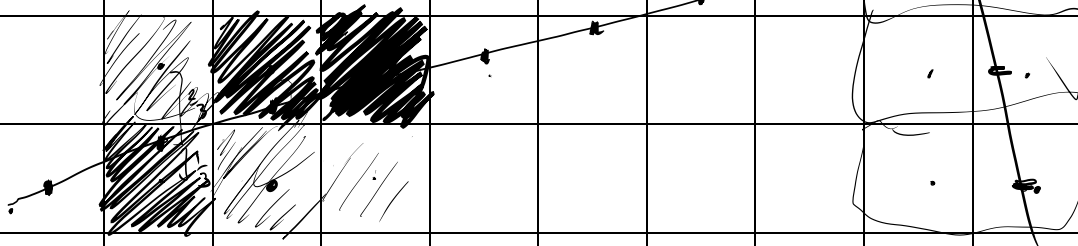


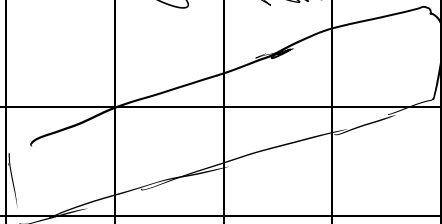
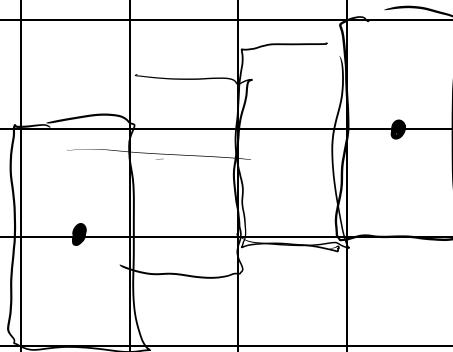
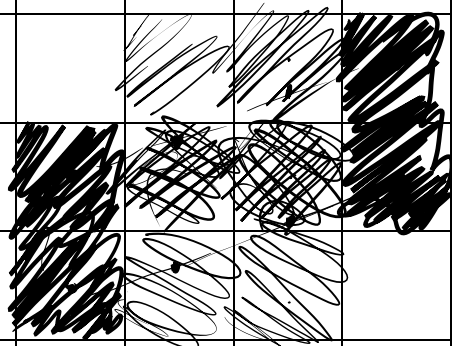


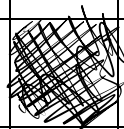
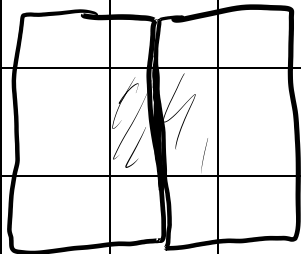
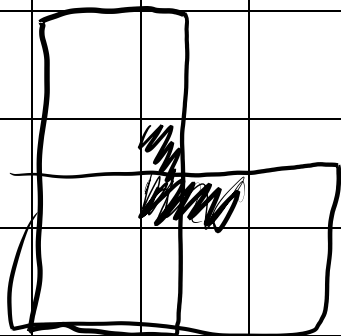


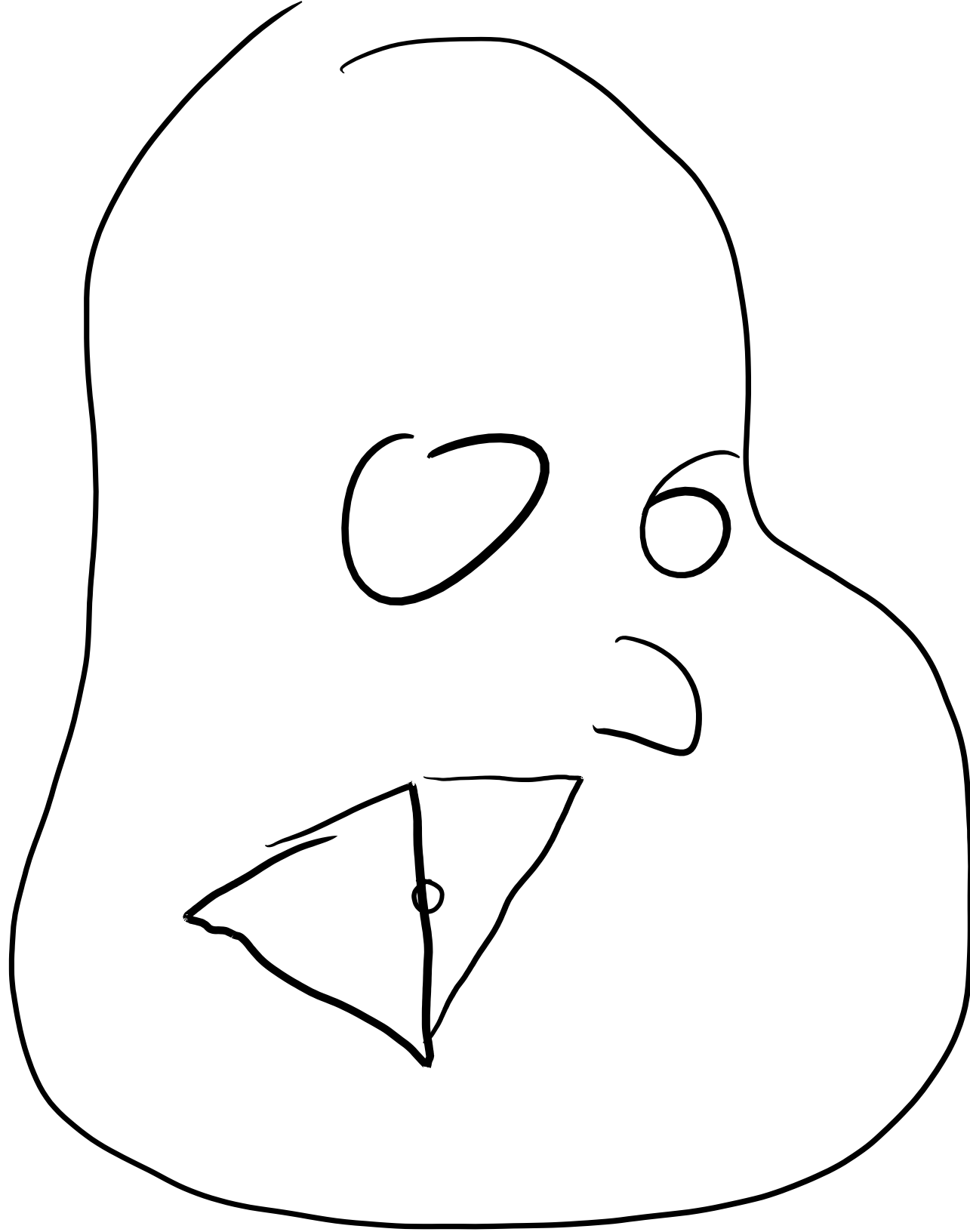
$W_u$

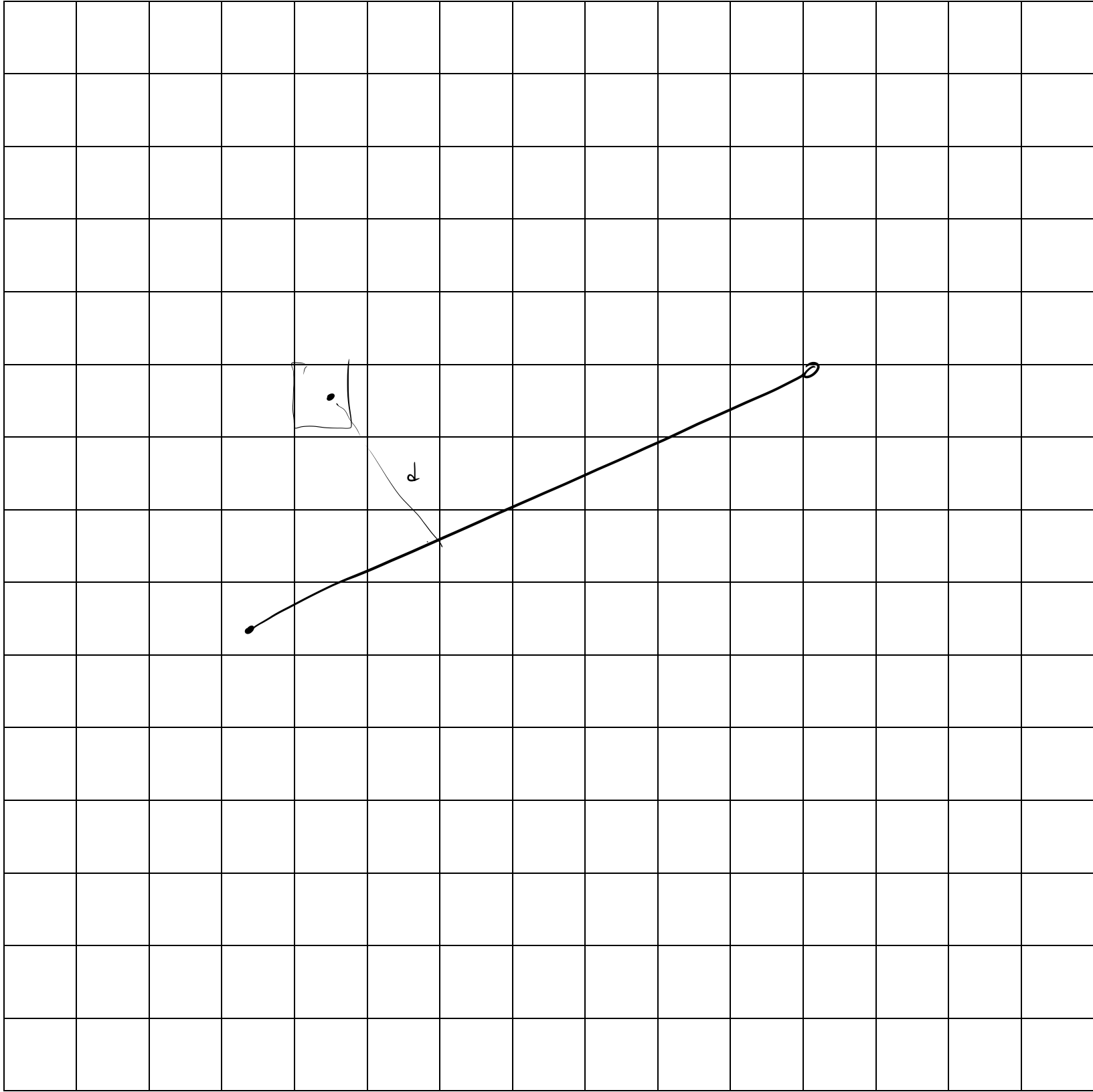
long-dis isect











Rasterize line  $O(\text{len})$

Ray-trace line  $O(\text{area of screen}) \geq \text{len}^2$

