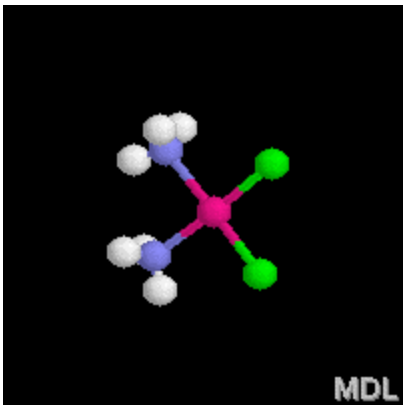
Using the distance measure on Chime, determine the following measurements. Report all distances in picometers (pm).

Alone the edge of the square planar structure of the cis isomer, measure the Cl-to-Cl distance and the N-to-N distance.

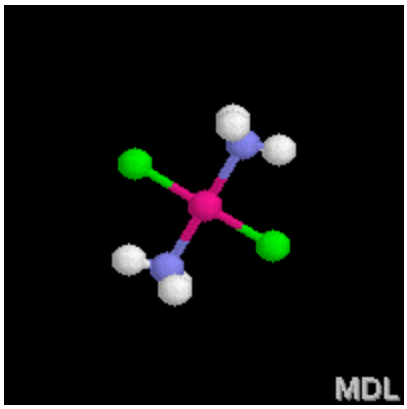
cis isomer



$d_{Cl\text{-}Cl}$ = 324 pm

$d_{N\text{-}N}$ = 317 pm

trans isomer



For the trans isomer, measure the Cl-to-Cl distance. $d_{Cl\text{-}Cl}$ = 458 pm

Find the platinium atom of the bound cisplatin on the DNA molecule. What color atom are you looking for? dark pink!

Measure the following distances:

N-to-N on the two quanines of the DNA	290 pm
N-to-N on the two NH_3 groups	291 pm

Measure the $N_{quanine}$-Pt- $N_{quanine}$ bond angle in the bound cisplatin. 90^o

Why doesn't the trans isomer bind to DNA? Cl-to-Cl distance is too large!

Draw the structure of quanine.
Circle the nitrogen that binds to the cisplatin.