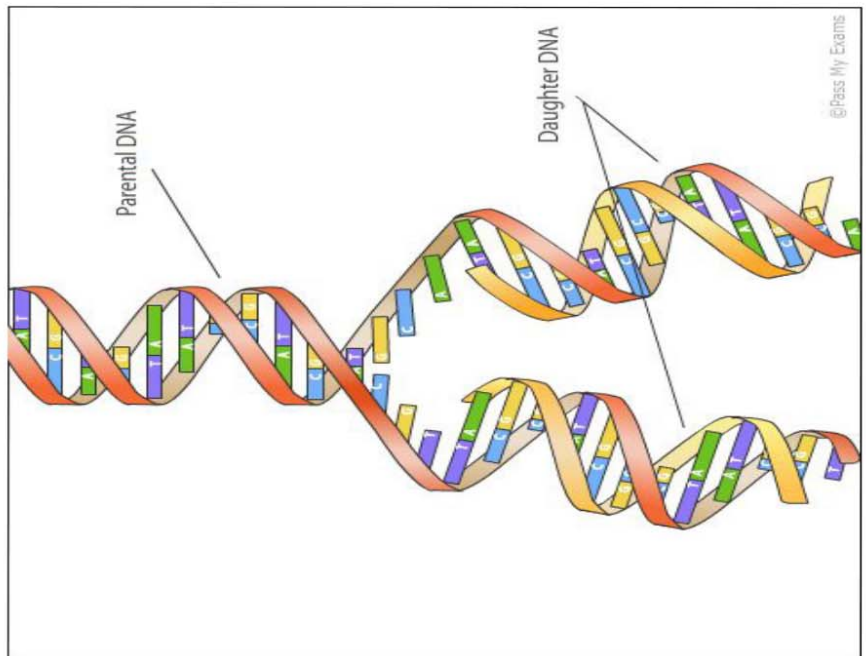
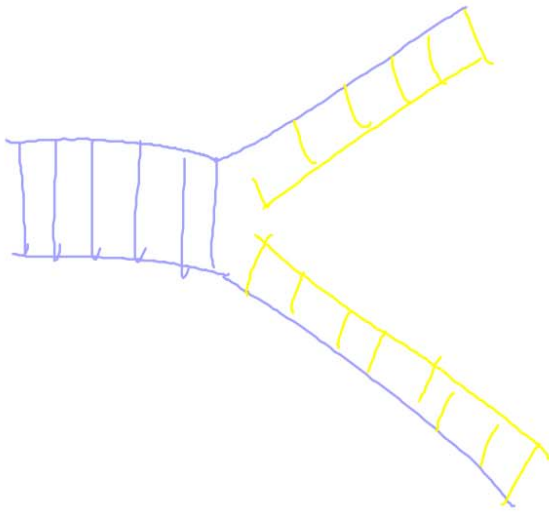


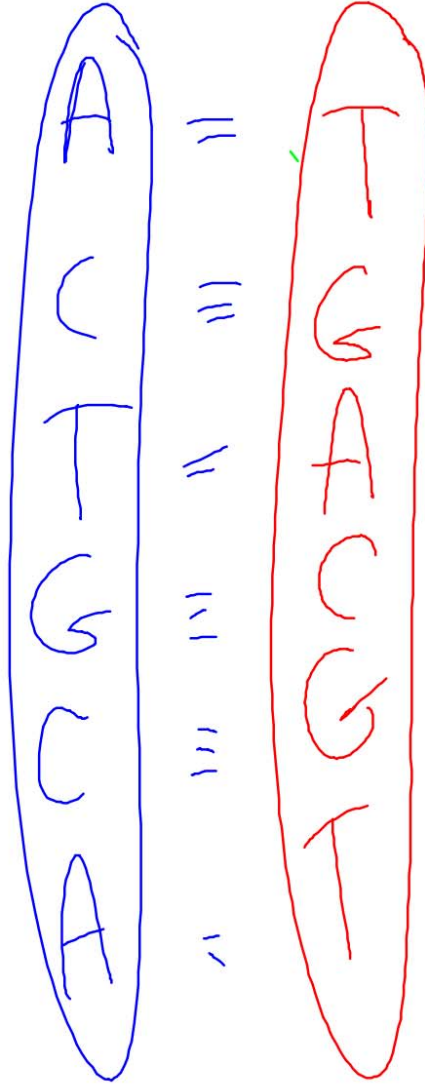
# DNA REPLICATION

In order for a cell to divide, it must first replicate its DNA



**DNA Replication** = producing two identical DNA strands from one original DNA molecule

**Practice:**



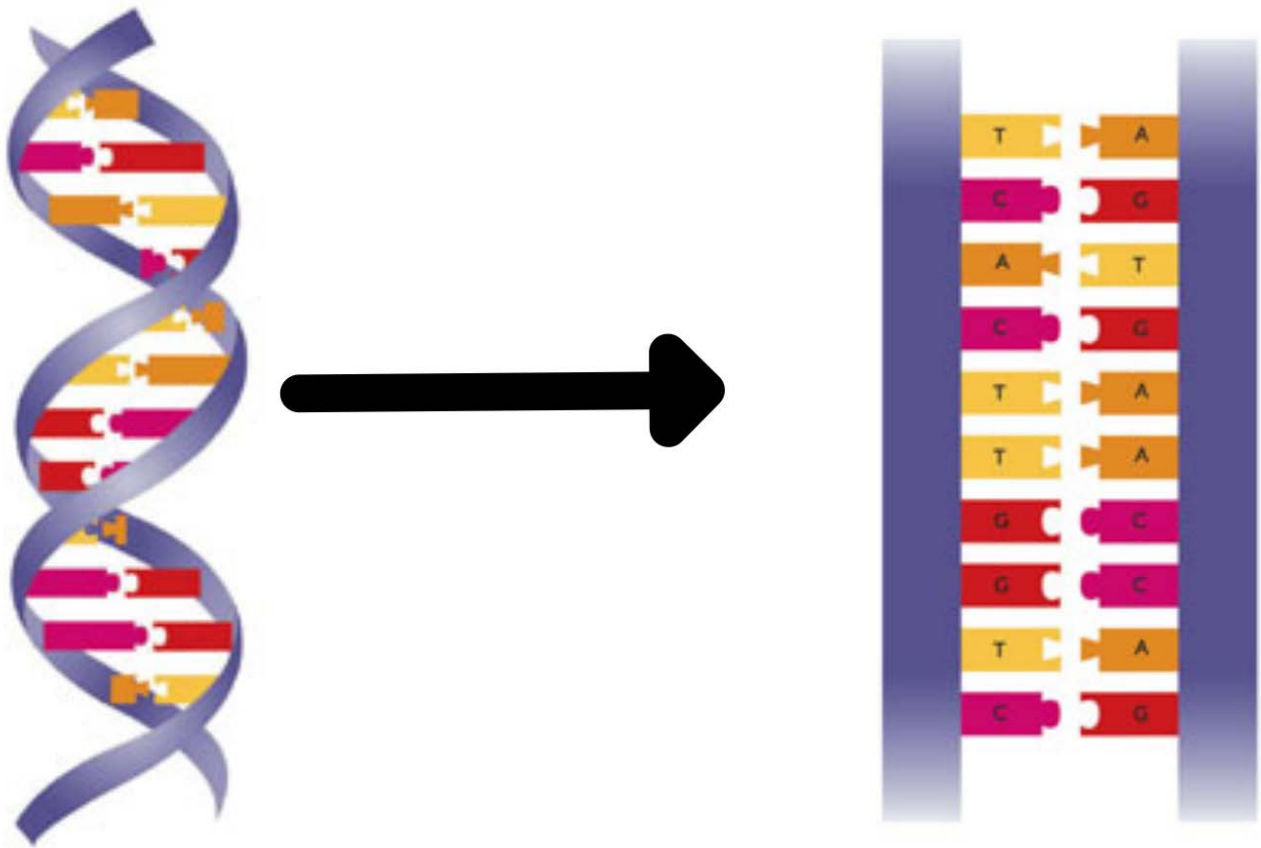
# DNA REPLICATION



## Steps in Replication:

1. Uncoil/Relax
2. "Unzip" (separate strands)
3. Add Complimentary Nucleotides & Rezip
4. Recoil

## STEP 1: UNCOIL



**ENZYME: TOPOISOMERASE**  
relaxes Chromatin

## STEP 2: SEPARATE STRANDS

Enzyme

**Helicase**

"unzips" DNA  
(breaking H bonds)



5'

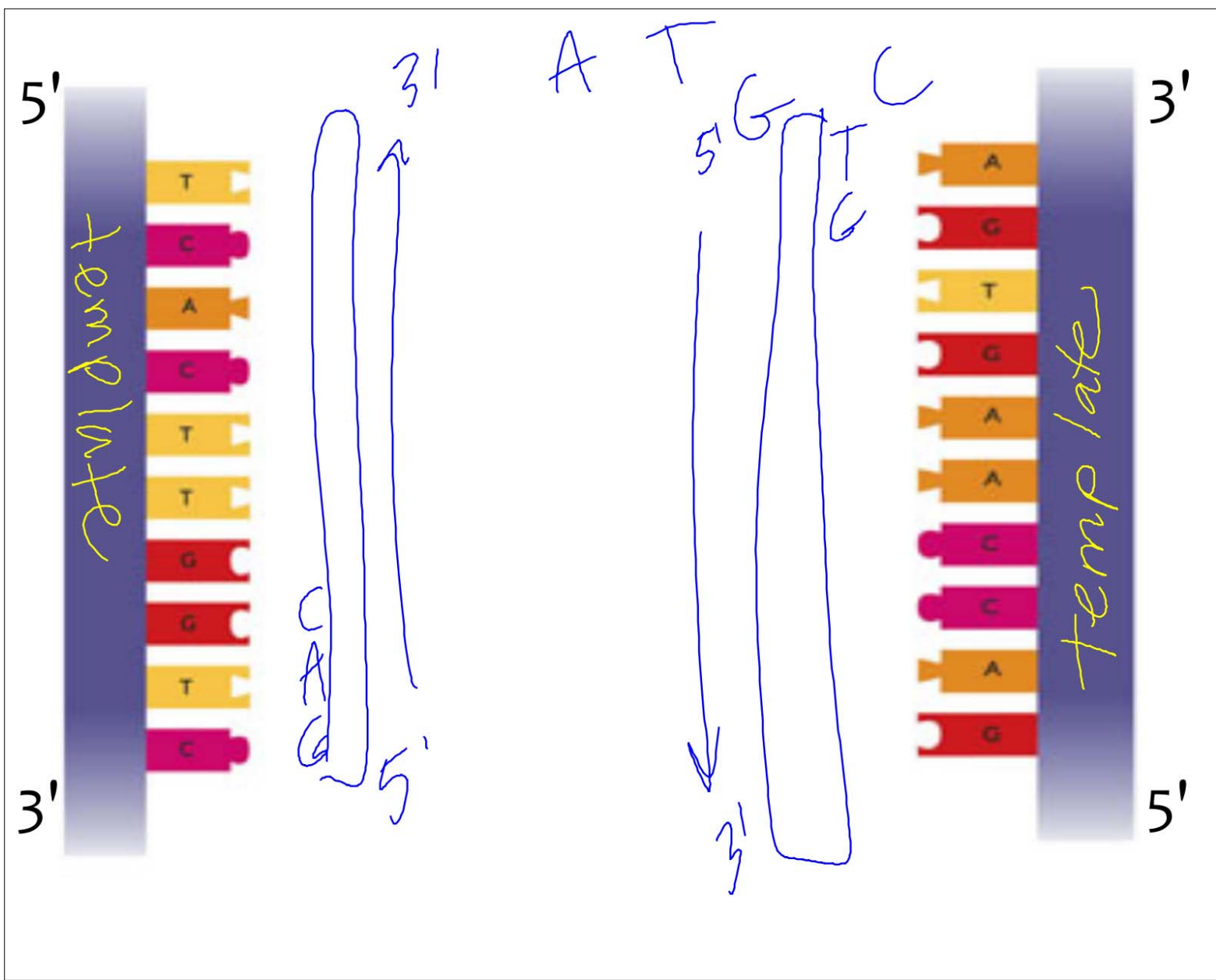


3'

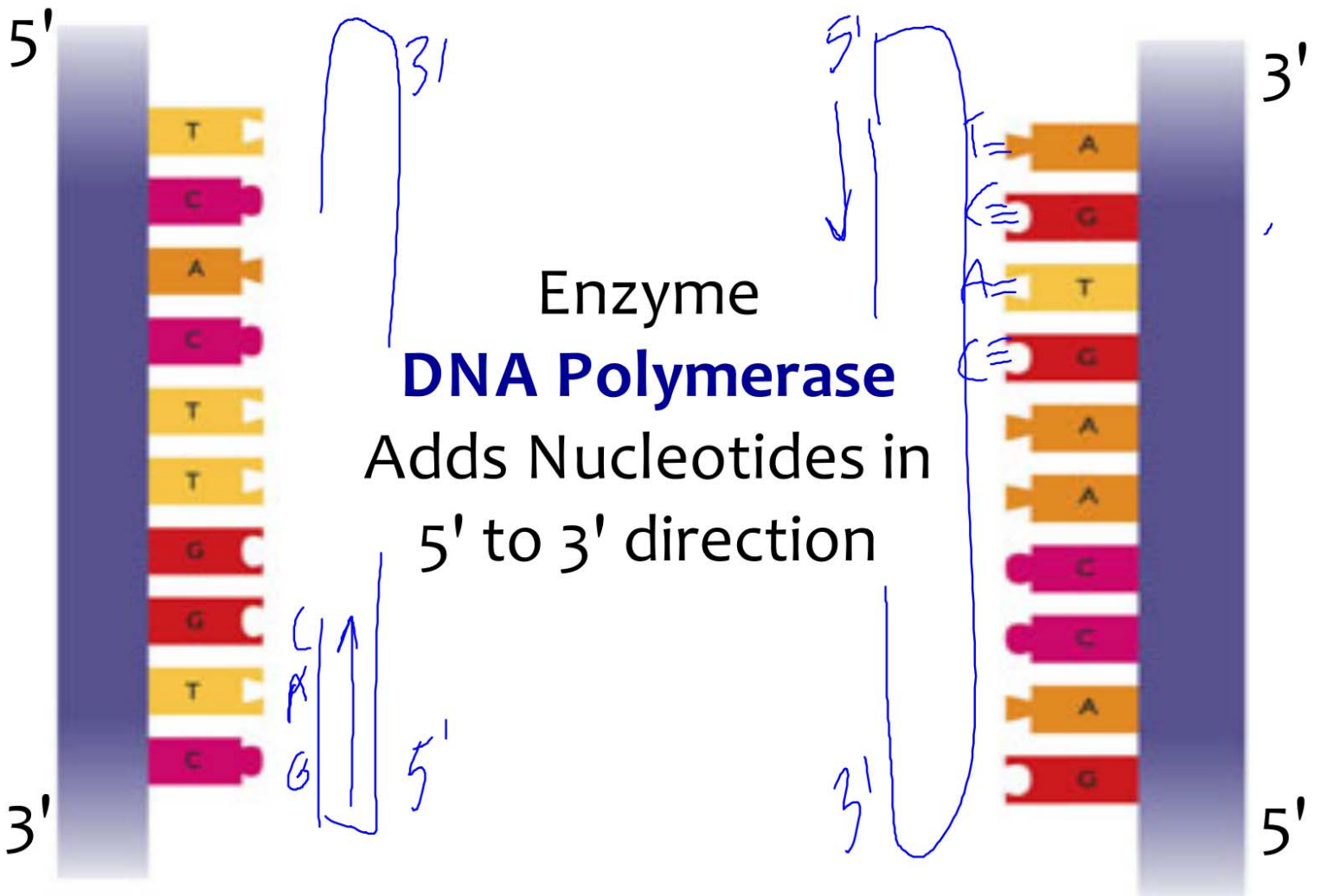
3'

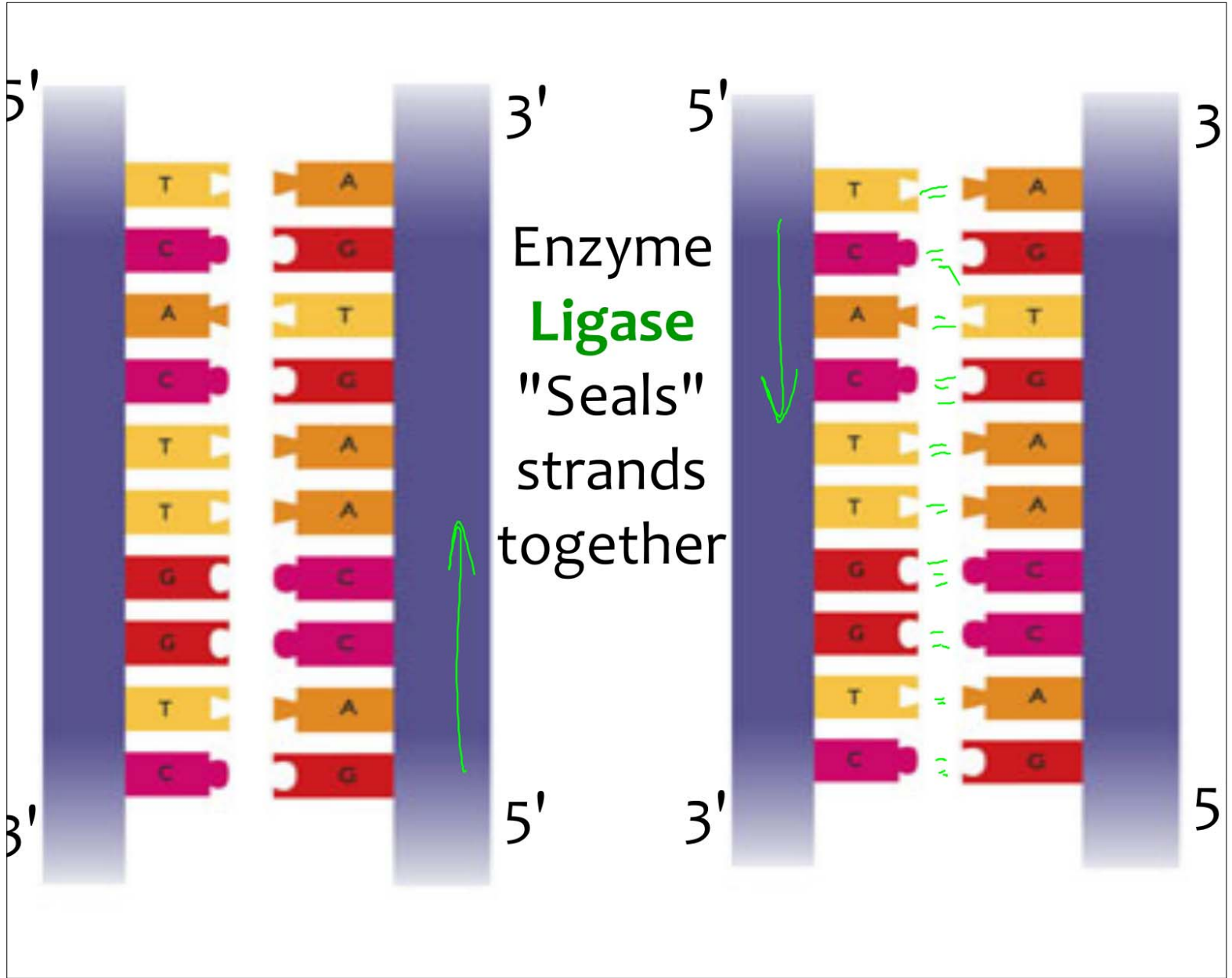


5'



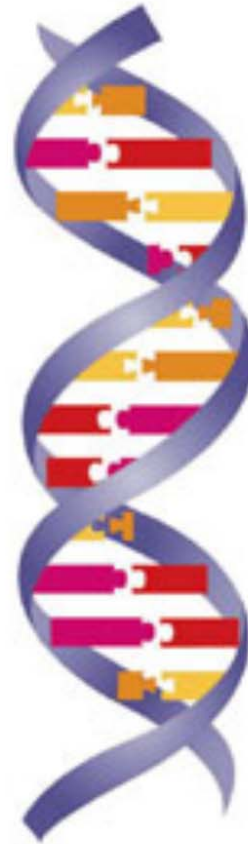
### STEP 3: ADD COMPLIMENTARY NUCLEOTIDES







## STEP 4: RECOIL



2 EXACT COPIES!!