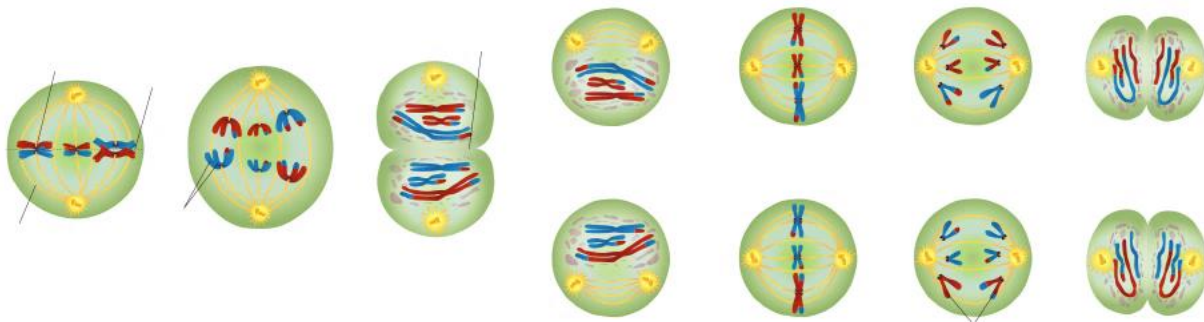
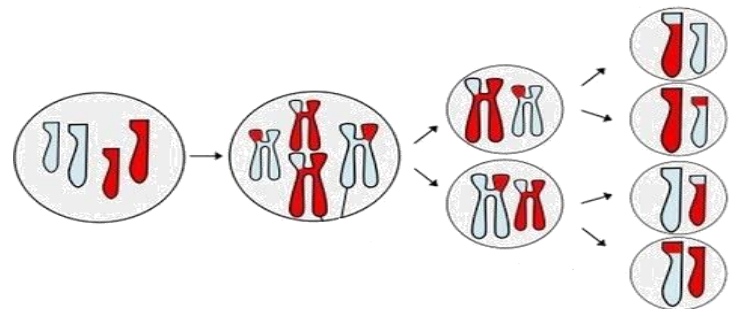
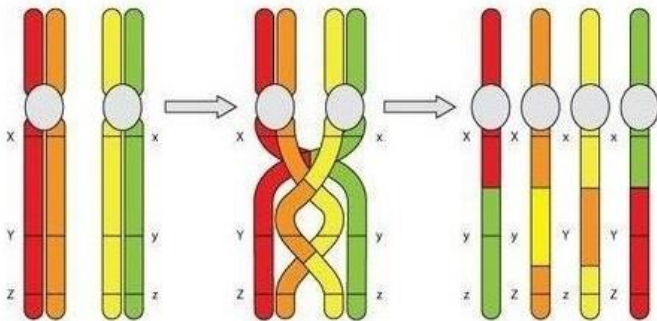
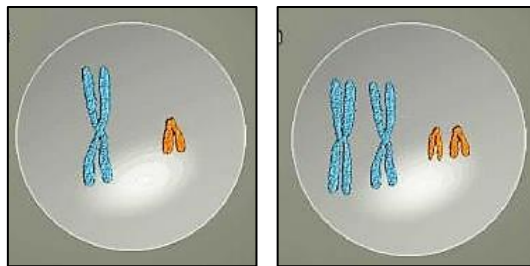
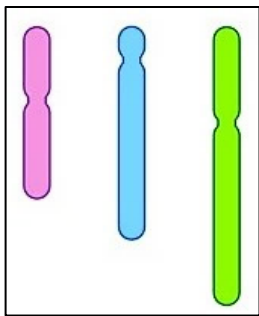


**Data for Test 3-1 (Meiosis, Crossing Over, DNA Replication, Transcription, Translation, Protein Synthesis)**

**Species A:** ATG GGT GAT GTT GAG AAA GGC AAG AAG ATT TTT ATT ATG AAG TGT TCC CAG TGC CAC ACC GTT GAA AAG  
 GGA GGC AAG CAC AAG ACT GGG CCA AAT CTC CAT GGT CTC TTT GGG CGG AAG ACA GGT CAG GCC CCT GGA TAC TCT TAC  
 ACA GCC GCC AAT AAG AAC AAA GGC ATC ATC TGG GGA GAG GAT ACA CTG ATG GAG TAT TTG GAG AAT CCC AAG AAG TAC  
 ATC CCT GGA ACA AAA ATG ATC TTT GTC GGC ATT AAG AAG AAG GAA GAA AGG GCA GAC TTA ATA GCT TAT CTC AAA AAA  
 GCT ACT AAT GAG TAA

**Species B:** ATG GGT GAT GTT GAA AAA GGC AAG AAG ATT TTT GTT CAG AAG TGT GCC CAG TGC CAC ACT GTG GAA AAG  
 GGA GGC AAG CAT AAG ACT GGA CCA AAT CTC CAC GGT CTG TTC GGG CGG AAG ACA GGC CAG GCT GCT GGA TTC TCT TAC  
 ACA GAT GCC AAC AAG AAC AAA GGC ATC ACC TGG GGA GAG GAT ACC CTG ATG GAG TAT TTG GAG AAT CCC AAA AAG TAC  
 ATC CCT GGA ACA AAA ATG ATC TTC GCT GGA ATT AAG AAG AAG GGA GAA AGG GCA GAC CTA ATA GCT TAT CTT AAA AAG  
 GCT ACT AAT GAG TAA

**Species C:** ATG GGT GAT GTT GAG AAA GGC AAG AAG ATT TTT ATT ATG AAG TGT TCC CAG TGC CAT ACC GTT GAA AAG  
 GGA GGC AAG CAC AAG ACT GGG CCA AAT CTC CAT GGT CTC TTC GGG CGG AAG ACA GGT CAG GCC CCT GGA TAT TCT TAC  
 ACA GCC GCC AAT AAG AAC AAA GGC ATC ATC TGG GGA GAG GAT ACA CTG ATG GAG TAT TTG GAG AAT CCC AAG AAG TAC  
 ATC CCT GGA ACA AAA ATG ATA TTT GTC GGC ATT AAG AAG AAG GAA GAA AGG GCA GAC TTA ATA GCT TAT CTC AAA AAA  
 GCT ACT AAT GAG TAA



→ Leading Strand: TACGAAGATTATCATCGACGACT ←

### Codons in mRNA

First Base	Second Base								Third Base
	U	C	A	G	U	C	A	G	
U	UUU	Phenylalanine	UCU	Serine	UAU	Tyrosine	UGU	Cysteine	U
	UUC	Phenylalanine	UCC	Serine	UAC	Tyrosine	UGC	Cysteine	C
	UUA	Leucine	UCA	Serine	UAA	Stop	UGA	Stop	A
	UUG	Leucine	UCG	Serine	UAG	Stop	UGG	Tryptophan	G
C	CUU	Leucine	CCU	Proline	CAU	Histidine	CGU	Arginine	U
	CUC	Leucine	CCC	Proline	CAC	Histidine	CGC	Arginine	C
	CUA	Leucine	CCA	Proline	CAA	Glutamine	CGA	Arginine	A
	CUG	Leucine	CCG	Proline	CAG	Glutamine	CGG	Arginine	G
A	AUU	Isoleucine	ACU	Threonine	AAU	Asparagine	AGU	Serine	U
	AUC	Isoleucine	ACC	Threonine	AAC	Asparagine	AGC	Serine	C
	AUA	Isoleucine	ACA	Threonine	AAA	Lysine	AGA	Arginine	A
	AUG	Methionine or start	ACG	Threonine	AAG	Lysine	AGG	Arginine	G
G	GUU	Valine	GCU	Alanine	GAU	Aspartic Acid	GGU	Glycine	U
	GUC	Valine	GCC	Alanine	GAC	Aspartic Acid	GGC	Glycine	C
	GUA	Valine	GCA	Alanine	GAA	Glutamic Acid	GGA	Glycine	A
	GUG	Valine	GCG	Alanine	GAG	Glutamic Acid	GGG	Glycine	G

