Corn Genetics Worksheet

I. Predictions

Cross A: RrSs × RrSs		
Genotypes/Probabilities	**Phenotypes**	**Phenotypic Ratio**
	Purple/Smooth	
	Purple/Wrinkled	
	Non-purple/Smooth	
	Non-purple/Wrinkled	

Cross B: RrSs × rrss		
Genotypes/Probabilities	**Phenotypes**	**Phenotypic Ratio**
	Purple/Smooth	
	Purple/Wrinkled	
	Non-purple/Smooth	
	Non-purple/Wrinkled	

II. Actual Count

Phenotypes	**Number**	**Phenotypic Ratio**
Purple/Smooth		
Purple/Wrinkled		
Non-purple/Smooth		
Non-purple/Wrinkled		

III. Post-Lab Questions

1. Which genetic cross most likely produced your ear of corn? Include evidence to support your answer.

2. How do you explain any differences between your actual results and the predicted results? Is the difference significant?

3. Examine the genotypes in cross A above. What is the ratio of purple to non-purple? _____ What is the ratio of smooth to wrinkled? _____ Explain what the term *independent segregation* might mean.