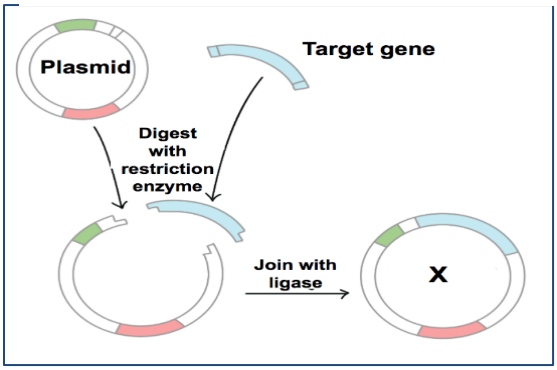
BCH 462

Plasmid Isolation and Purification

(H.W.)

Answer the following questions:

1-Which of the following best describes the result of this process, labeled X?



2-Plasmids used in cloning contain an antibiotic resistance gene. How does this help scientists?

3-Place the steps of DNA cloning in order from first (top) to last (bottom).

- The vector is introduced into a host cell, which reproduces.
- DNA is pasted into a vector, usually a plasmid.
- A piece of DNA is cut using restriction enzymes

4- A scientist wants to insert a human gene into bacteria, but she accidentally uses a different restriction enzyme on the human gene than she does on the plasmid. What is most likely to occur?

5-Mention the function of each chemical used during plasmid isolation and purification.

Chemical	Function
alkaline lysis solution I	
Glucose	
Tris-Cl	
EDTA	
alkaline lysis solution II	
SDS	
NaOH	
alkaline lysis solution III	
Acidic potassium acetate	