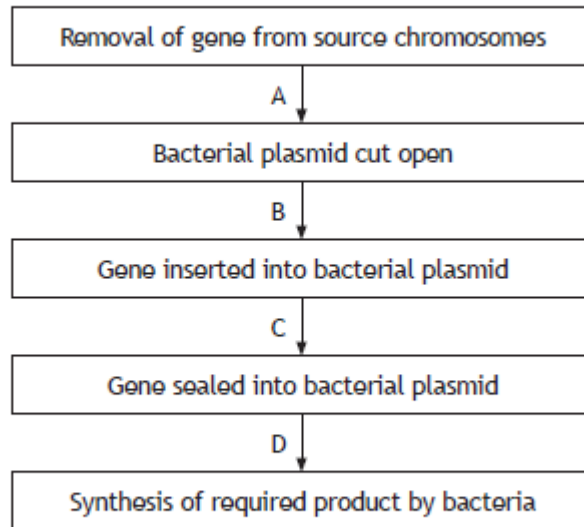


Homework 3- Genetic Engineering

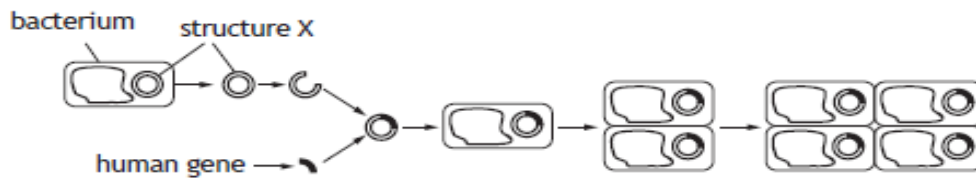
1.

Some stages of genetic engineering are shown below.



Which letter indicates the stage where the plasmid is inserted into a bacterial cell?

3. The diagram below represents part of the process of genetic engineering.



- (a) (i) Structure X is removed from the bacterium and modified during this process.

Name structure X.

1

- (ii) The bacteria have an initial concentration of 1000 cells/cm^3 .

Each cell divides once every 30 minutes.

Calculate how long it will take for the concentration to become greater than 15000 cells/cm^3 .

1

Space for calculation

_____ hours

2. _____