Chapter 9 Review - pgs 271-273

Review

#1 recombinant DNA - DNA from 2 sources

genetic engineering - manipulating bacteria to make recombinant DNA for a function (medical, agricultural, experimental)

#3 a - plasmid → used as a self-replicating vector to pass on genes including conjugative, dissimilative, resistence, toxins, etc.

b - viral genome → used to identify restriction enzymes & to make vaccines

c - antibiotic resistant genes → used as a selective maker to ensure engineering was successful.

d - restriction enzyme → used to make recombinant DNA

#6 BamHI, EcoRI, & HindIII produce sticky ends

- sticky ends make it possible to insert new DNA and to rejoin the strands using DNA ligase.

#9. medicine: vaccines, insulin, hGH, vitamins, etc

agriculture: herbicide, insecticide, temperature alterations, growth hormone

#10 to only allow bacteria with the Ti plasmid to survive and infect the plant (selective marker)

MC

#1 B

#2 B

#8 C

#9 E

CT

#1 EcoRI → 2 fragments
HindIII → 2 "
Both → 4 "

• HindIII → smallest fragment with tet^R

#4 Dark colored colonies → non-selective marker (color change).
- conjugation occured btw inhibited bacteria and bacteria with the plasmid. The plasmid for amp^R was passed on allowing for new growth.

CA #2
- yes the "transformed cell's DNA" contains the original cell's DNA aswell as the DNA from the vector with the new gene added.