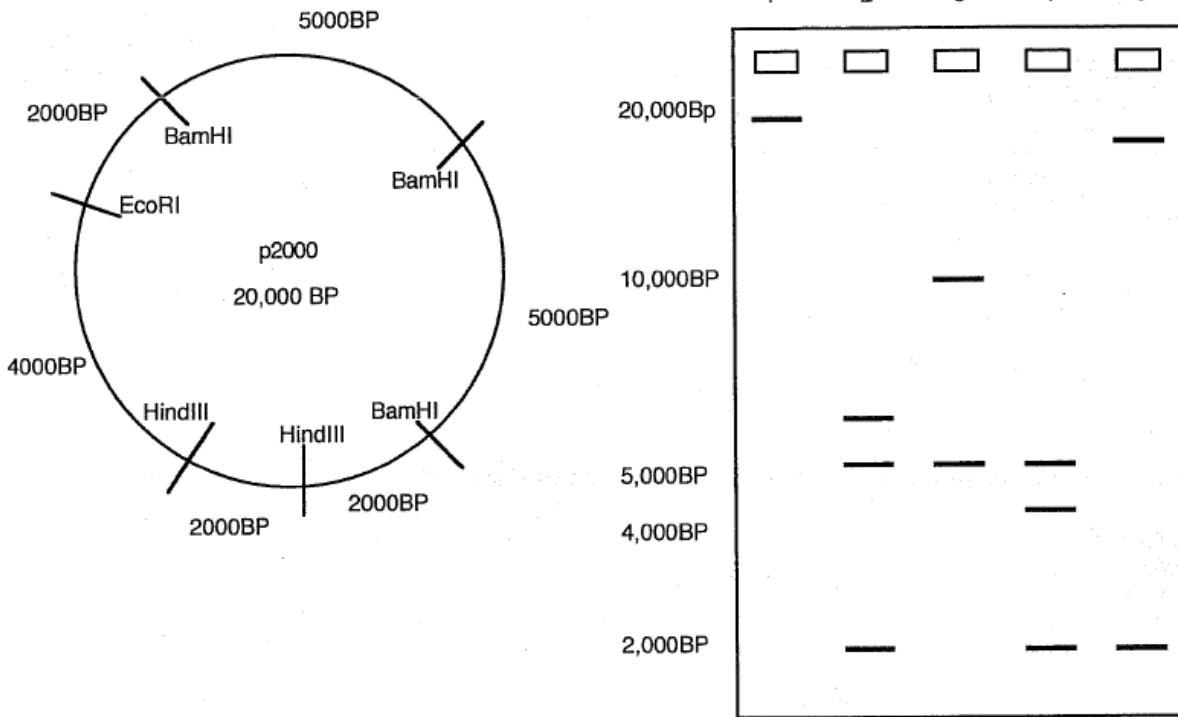
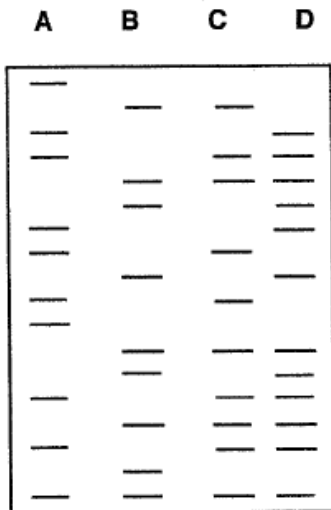


The figure below shows the results of digesting the plasmid p2000 with various mixtures of three restriction enzymes



10. Which lane represents the fragments produced using Bam HI only?
 A) Lane 1 B) lane 2 C) lane 3 D) lane 4 E) lane 5
11. Which lane represents the fragments produced using Eco RI only?
 A) Lane 1 B) lane 2 C) lane 3 D) lane 4 E) lane 5
12. Which lane represents the fragments produced using Hind III only?
 A) Lane 1 B) lane 2 C) lane 3 D) lane 4 E) lane 5
13. Which lane represents the fragments produced using Bam HI and Hind III?
 A) Lane 1 B) lane 2 C) lane 3 D) lane 4 E) lane 5
14. Which lane represents the fragments produced using Bam HI, Hind III, and Eco RI?
 A) Lane 1 B) lane 2 C) lane 3 D) lane 4 E) lane 5

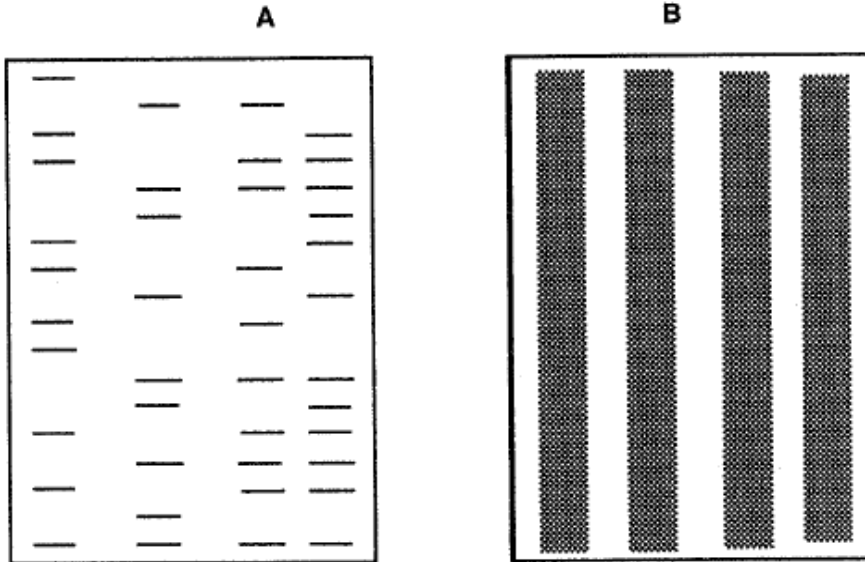


15. Based on the DNA fingerprints/profiles in the gel above, which of the following statements is consistent with the results.

- A) B is the child of A and C
- B) C is the child of A and B
- C) D is the child of B and C
- D) A is the child of B and C
- E) A is the child of C and D

16. Which of the following are least likely to be siblings?

- A) A and B
- B) A and C
- C) A and D
- D) C and D
- E) B and D



17. In reference to the two gels above, which gel would be produced if you digested and electrophoresed whole genomic human DNA?

GEL _____ Now explain your answer _____

The only way to transform gel B into image A would be to _____ the DNA in gel B onto nitrocellulose paper and then wash the paper in a solution containing a _____. The paper would then be imaged with a paper sensitive to the radiation given off by the probe. This technique is called

_____ and the entire technique is a _____.

18. What does RFLP stand for? _____

If something is polymorphic, what does that mean? _____

RFLP's are produced by using _____

RFLP analysis of a random sample of the Caucasian population is as follows:

Allele	Frequency
A ₁	.25
A ₂	.15
A ₃	.10
A ₄	.05
A ₅	.20
A ₆	.25

19. RFLP analysis of a man finds that he is of the genotype A₃/A₃. What proportion of the Caucasian population would share his genotype?

A) 0.20 B) 0.10 C) 0.05 D) 0.01 E) 0.001

20. A Caucasian man is believed to have committed the rape of a Caucasian woman. His genotype is A₂/A₄ and the victim's is A₃/A₃. The DNA from a vaginal swab is found to have alleles A₂, A₃, and A₄. This RFLP analysis proves the man is

A) not guilty B) probably not guilty C) certainly guilty D) possibly guilty E) on crack