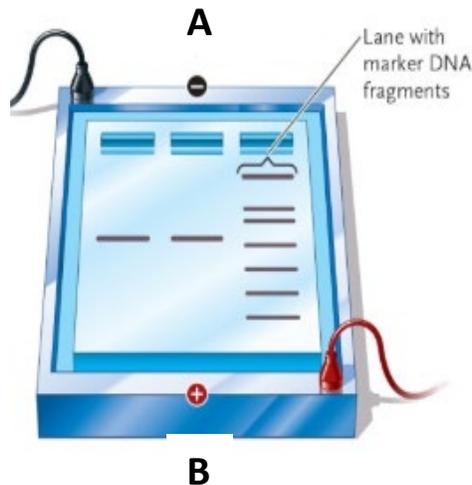


DNA Techniques

Read Chapter 10.5

Fill in the blanks

1. _____ is a method used to separate strands of DNA based on size.
2. The phosphate group in nucleotides has a _____ charge and moves towards the _____ end of the apparatus.
3. In the following diagram, which end would contain smaller DNA fragments? A or B.
 - a. A
 - b. B



4. _____ is a technique used to generate multiple copies of a specific sequence of DNA without the use of bacteria.
5. In PCR, what causes the DNA strands to separate _____.
6. The enzyme that is used in PCR to extend primers is called _____.
7. The enzyme _____ is used in RT-PCR to make DNA from RNA.
8. Which type of RT-PCR quantifies the amount of DNA being replicated? _____
9. When DNA is made from mRNA, the resulting DNA is called _____.
10. Does cDNA contain introns? (yes/no) _____.

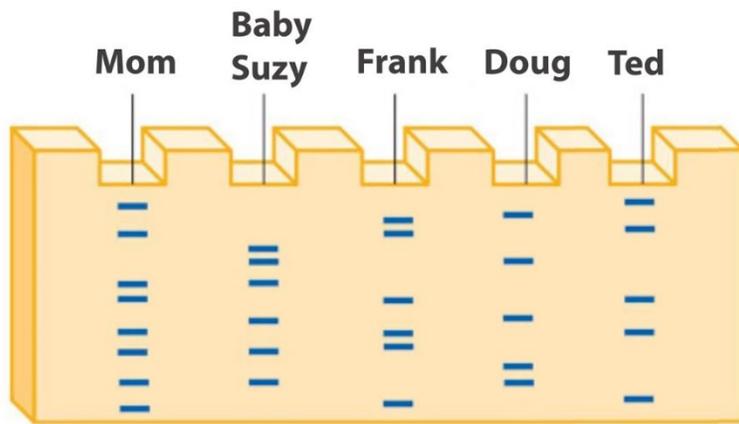
11. Match the blotting method with the molecule it detects. **Protein, RNA, DNA**

- a. Northern blot _____
- b. Southern blot _____
- c. Western blot _____

12. DNA fingerprinting is a technique used to compared repeat fragments of DNA called _____.

13. Who is the dad?

- a. Frank
- b. Doug
- c. Ted



14. _____ refers to the process of inserting a healthy gene into a person's cells to replace a mutated gene.

15. _____ is a new type of gene therapy that can be used to more precisely insert or remove specific DNA sequences.

16. Cas9 is an enzyme that cuts DNA and has an associated _____ molecule that helps it line up with a specific DNA sequence.