Name _____ Per _____ Date _____

Study Questions for PCR

1. Which chromosome and region is being investigated for this lab?

2. What is polymorphic DNA?

3. How is polymorphic DNA used for identification purposes?

4. What is CODIS? How is it used to solve crimes?

5. List at least 3 different chromosomes and loci CODIS uses to profile an individual.

6. What is the difference between a STR and a VNTR?

7. Is STR or VNTR used predominately in forensic science by law enforcement? Why?

8. Why is PCR also called DNA amplification?

9. Why is the PCR machine also called a thermocycler?

10. List and describe at least 4 important safety guidelines to follow during this investigation (as described by the instructions).

11. Briefly outline the steps of PCR: denaturation, annealing, extending.

12. What are the conditions of each step in the PCR process in this investigation?

13. Why do you think the centrifuge is used so often in the lab? Give an example to illustrate your reasoning.

14. At the optional stopping points, why do samples need to be stored at -20 °C? What might happen if they are not stored at this temp?

15. Give at least one advantage and disadvantage of using ethidium bromide for visualizing the gel.

16. Give at least one advantage and disadvantage of using FlashBlue for visualizing the gel.