Cell Division Review

1. What is a chromosome? What are the components of a chromosome? How many chromosomes are present in a human cell?
2. What are the stages of the cell cycle? What happen during each stage?
3. What is a spindle fiber and what is its function?
4. What are the four stages of mitosis? Be able to identify and describe each phase in order.
5. What is cytokinesis? How does cytokinesis differ in animal and plant cells?
6. What is the function of a metaphase plate?
7. What is the function of centrioles?
8. During which phase does nuclear membrane break down and nucleus disappear? Why does that happen?
9. What is the purpose of meiosis?
10. What are gametes? How are gametes different from somatic cells?
11. What are the phases of meiosis in order? Be able to identify and describe each phase in order.
12. What are homologous chromosomes? Are homologous chromosomes found during mitosis or meiosis? In which phase do they pair up?
13. What is the difference between chromosome, chromatid, sister chromatids, and centromere?
14. What is crossing-over? What is the advantage of crossing over?
15. What is fertilization? What is formed after fertilization?
16. List four differences between mitosis and meiosis.
17. Describe how cancer develops in 3 sentences or less.
18. Explain how cancer cells differ from healthy cells.
19. What are stem cells? What is the benefit of using stem cell therapy?