**Science 9 – Section 5.5 Cell Division Assignment – Value 30 – January 7, 2020**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DUE DATE: January 8, 2020**

1. Multiple Choice – Select one correct answer for each of the following. Value 22
2. The cell cycle is a series of events or stages that cells go through as they:
3. grow and replicate chromosomes.
4. grow and divide.
5. grow and replicate organelles.
6. Indicate which of the following indicates the proper order of the phases of the cell cycle.
7. Cell division, G1 (growth phase), G2 (second growth phase), and the S phase
8. G1 (growth phase), G2 (second growth phase), cell division, and the S phase
9. G1 (growth phase), S phases, G2 (second growth phase), and cell division
10. Cell division consist of two major stages which include the following:
11. Mitosis and S phase
12. Mitosis and cytokinesis
13. Mitosis and G1 phase
14. During the G1 or growth phase the cell:
15. Increases the cell in size
16. Synthesizes new proteins and organelles
17. All of the above.
18. During this phase the chromosomes are replicated and DNA synthesis takes place.
19. G2 phase
20. G1 phase
21. S phase
22. This first stage of cell division, mitosis, is described as:
23. the division of the cytoplasm
24. the division of the nucleus
25. the division of one cell into two identical cells.
26. The second stage of cell division, called cytokinesis, is described as:
27. the division of the nucleus
28. the division of the cytoplasm
29. the division of the organelles only.
30. Interphase is the period of growth that occurs between cell divisions and include the following:
31. G1, S, and cytokinesis
32. G1, S, and mitosis
33. G1, S, and G2
34. Genetic information is passed from one generation to the next on the following:
35. chromosomes
36. nuclear membrane
37. spindle fibers
38. Chromosomes are made of the following components:
39. DNA and organelles
40. DNA and RNA
41. DNA and proteins
42. Each chromosome consists of:
43. three identical sister chromatids
44. two identical sister chromatids
45. four identical sister chromatids
46. Biologists divide the events of mitosis into four phases. Identify the phases in the correct order.
47. Metaphase, Prophase, Anaphase, and Telophase
48. Prophase, Metaphase, Telophase, and Anaphase
49. Prophase, Metaphase, Anaphase, and Telophase
50. During which phase of mitosis are the chromosomes visible (shorten and thicken)?
51. Metaphase
52. Prophase
53. Anaphase
54. During which phase of mitosis does the nuclear membrane begin to fade or dissolve?
55. Telophase
56. Prophase
57. Metaphase
58. During this phase of mitosis, the double stranded chromosomes line up across the center or equatorial plate of the cell.
59. Anaphase
60. Prophase
61. Metaphase
62. During this phase of mitosis, the chromosome (or sister chromatids) separate and move to the opposite ends or poles of the cell.
63. Metaphase
64. Anaphase
65. Prophase
66. Cytokinesis begins during this phase of mitosis.
67. Metaphase
68. Telophase
69. Anaphase
70. Cytokinesis is described as:
71. The second phase of cell division in which the cytoplasm and organelles separate into two equal parts to form two identical daughter cells.
72. The first phase of cell division in which the cytoplasm and organelles separate into two equal parts to form two non-identical daughter cells.
73. The third phase of cell division in which the cytoplasm and organelles separate into two equal parts to form two identical daughter cells.
74. When the cell membrane during cytokinesis is drawn or pinched inward causing the cytoplasm to pinch in half. The resulting indentation is called:
75. a furrow.
76. a funnel.
77. a cell wall.
78. Cytokinesis in plant cells, forms the following along the middle, creating two new cells.
79. a furrow.
80. a cell wall.
81. a funnel.
82. A normal cell of a pigeon has 80 chromosomes. After the cell has undergone mitosis, how many chromosomes would you expect to find in each cell?
83. 40
84. 80
85. 46
86. Missing or extra chromosomes after the process of mitosis may cause the following to occur:
87. Cells to form a mutation.
88. Cells to not function properly and die.
89. All of the above.
90. Cell Cycle – Complete the following diagram using the word list below. **Value 4**

**G1 Phase S Phase G2 Phase Cell Division**

**Interphase**

1. Identify each of the following graphics as one of the four phases of mitosis. **Value 4**

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